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EDUCATIONAL METHOD

A Journal of Progressive Public Schools

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EDUCATIONAL METHOD

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EDUCATIONAL METHOD

VOLUME IX DECEMBER, 1929 NUMBER 3

EDITORIALLY SPEAKING

INVENTION AND APPRAISAL

Several writers, among them Dewey, Freeman, and Rugg, have recently called attention to the fact that two contemporary movements in education are operating separately that ought to be united. Their exponents may be characterized roughly as the innovators and the scientists. The former found "experimental" schools, abolish the traditional subjects of study and replace them with centers of interest, provide opportunity for spontaneous, creative expression, and stress the social organization and social life of the school. The latter search for facts upon which to base the choice of curriculum materials, the classification and promotion of pupils, the arrangement of drill exercises, the judgment of the efficiency of teaching, and the like. The innovators are much concerned with educational philosophy, the principles of progressiveness, the rights of the child, and the betterment of the social order. The scientists are often skeptical as to philosophy, rely rather upon mathematics and laboratory procedures, insist on the necessity of handing on the social inheritance, and in general would refine upon the school program as it is rather than make radical changes in it. Of course there are all shades and degrees of variation from these central tendencies, but the line of cleavage is nevertheless clearly marked.

The situation is unfortunate in more ways than one. In the first place, as everyone knows, there is now widespread popular belief in "science" as the instrument that shall finally answer all our questions and relieve us of all our woes. It has already so far transformed our ways of living and of satisfying our wants that a general belief in its universal efficacy is not to be wondered at. That the findings of science should, therefore, appear to assume the indefinite continuance of the common school as we have known it, with many minor changes making for economy and efficiency but no fundamental reform, is of tremendous importance. The impression that conventional practices are in the main justified tends to perpetuate them. Thus science, which once promised to be revolutionary in its effects on education, turns out to be a stabilizing force.

Meanwhile, with certain striking exceptions, those responsible for new ventures in curriculum and method have gone their way with little regard for educational science, either in projecting their plans or in estimating their results. Depending upon their own experience and observation and guided by certain ideals as to child life and growth, they have founded schools, de-

veloped programs, and attained to a following with only empirical sanction.

The time seems ripe for bringing these two movements together. Enough attempts have been made to break away from the procedures of the common school as we have long known it to suggest any number of controlled experiments to determine the validity of the claims made for the new measures. Can children be trained to "think straight" about contemporary social problems by the newer methods? Do they make greater gain in power of self-control and self-direction? Can they actually perform life's duties and choose among life's wholesome pleasures better than those who have not been subjected to the new régime? Do they display to a greater degree a desirable individuality and do they prove to have creative abilities hitherto unsuspected? Will the innovations, in short, give us a school that will serve at once the demands of society that the immature shall be prepared for their responsibilities and the needs of the individual for opportunity to live and grow?

So many new ideas have been introduced into educational discussion and to some extent into educational custom since 1900 that taking stock would appear to be now in order. If educational science will concern itself for a while with the evaluation of "progressive practices" instead of being so largely preoccupied with refining upon things as they are, it will render an estimable service. Certainly all the innovators should welcome its aid. For without it there will always be a reasonable doubt as to whether the medicine killed or cured.

A CHART FOR THE ANALYSIS OF THE TEACHING OF ARITHMETIC

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The teacher and the supervisor of arithmetic are confronted at the present time with the problem of selecting from the many general methods of teaching that are grouped with such names as contract plan, Dalton plan, Morrison plan, project method, Winnetka plan, etc., the methods that will most likely result in the accomplishment of the functions and objectives of instruction. There is practically no objective evidence as to the relative effectiveness of these plans of instruction, although each has strong proponents.

From the point of view of educational theory there are certain general principles of teaching which at present have almost universal acceptance as far as the teaching of arithmetic is concerned. They are based on certain philosophical considerations supported in some cases by a mass of scientific evidence, and in other cases by mere social theory. These theories or principles as they apply to the teaching of arithmetic may be stated as follows:

1. Provision must be made for individual differences in rates of learning, learning difficulties, and interests.

2. The point of view of social utility should determine the content of the curriculum.

3. Pupils will best learn to apply numbers by applying numbers in social situa-

tions similar to those found in life outside the school, thereby enriching their number concepts and showing them the practical uses of numbers.

4. The teaching of arithmetic should contribute to the educational objective of the socialization of the individual through the development of desirable social qualities and attitudes.

5. The teaching of arithmetic should constantly stress the purposes and functions of number to the end that the individual may have an appreciation of number as a device invented by man to bring order, arrangement, and precision to the quantitative aspects of the environment.

6. Consideration of applications of number should not be limited to the arithmetic period, but should take place whenever its need arises naturally in the work in any subject.

These principles are being applied at the present time in varying degrees and ways. The chart on page 134 presents a tentative schematic plan by means of which supervisors and teachers can analyze the teaching of arithmetic from a variety of points of view for the purpose of determining the *level* at which the teaching in particular classes or schools is being done. Seven levels in all are analyzed. Detailed descriptions of these seven levels follow, which show how the various items in the chart may be combined to show their presence in typical teaching situations.

The criterion which has been used as the basis for determining levels of increasing merit in teaching is the extent to which applications of the principles listed above are evident in the work of the teacher. As can be seen from the descriptions of the various levels, at Level 1 the principles are practically ignored or else wholly misapplied—at least they are not apparent in the procedures used in the classroom. The chart makes clear the changes that occur from level to level until a level of work is reached which is obviously much superior to that in the lower levels. The number of steps in the scale might well be reduced to five although differences in the types of work described at each level are readily apparent.

The series of seven descriptions can be used as a basis for determining the level which most nearly describes the present practice in a system or the work of the individual teacher. In a sense this series of descriptions may be used as a self-rating device by teachers of arithmetic. It should be pointed out that teachers of widely varying degrees of skill will undoubtedly be found at each level. Undoubtedly the instructional materials used in the class play an important part in the determination of the extent to which the basic principles of instruction listed above are applied. As has been pointed out elsewhere in this article, the tendency is definitely to recognize the interests and needs of child life in the preparation of materials of instruction. The careful studies that have been made to determine the learning difficulties in arithmetic and to provide for differences in the rates at which children learn have already profoundly affected the teaching of arithmetic. The use of excursions, projects, and activities of many kinds has tended to improve the quality of instruction very much. The series of descriptions of levels will have served its purpose if it makes clear to those interested the possibilities in the teaching of arithmetic. Arithmetic should not be considered to be merely a tool subject in which the emphasis should be placed on teaching the pupils how to compute accurately and quickly. Arithmetic can make as great a contribution to the modern objectives of education as is made by any subject in the curriculum.

LEVELS IN THE TEACHING OF ARITHMETIC—GRADES 3 TO 6

Level 1

The teacher emphasizes the skills involved in computation in the fundamental operations and their application in isolated problems found in the textbook. The objectives of the teaching are to develop the ability of the pupil to perform the computations with speed and accuracy. The teacher has an inadequate conception of the variety of skills involved in each operation and frequently omits important skills and steps in the learning process. There are no adequate standards of achievement. The only tests of achievement used are those prepared by the teacher, none being included in the textbook that is used. The content of the material used in the arithmetic period is mostly limited to that given in a formal textbook. The text makes a minimum use of pupil interests and stresses the formal application of the processes in verbal problems largely on the adult level.

The class is dealt with as a unit, no attempt being made to adapt instruction to the individual differences existing among the pupils. No attempt is made to diagnose pupil difficulties. Sometimes the teacher supplements the drill material in the textbook with cards containing sets of examples prepared by the teacher. No use is made of graphs, games, or other devices to create interest in the work. There is no discussion of the social applications of the processes other than the material in the textbook. No attempt is made to consider the application of arithmetic in the other subjects of the curriculum. Work in arithmetic is limited strictly to the time assigned to that subject on the daily schedule of classes. Tables of measures are memorized, but no concrete work in their application is undertaken.

Level 2

At this level the major objectives of the work in arithmetic are to develop in the pupils the ability to perform the operations in arithmetic with speed and accuracy and to develop an interest in the subject by various devices. The teacher has a good grasp of the basic skills in the various operations and of the steps in the learning process, and presents them logically and clearly. The text used by the class contains many problems on the level of the pupil's interests and within their range of experiences. Most of the problems are in isolated sets, one problem being unrelated to another. The class is taught as a unit, no definite provision being made for individual differences. Pupils having serious difficulty are given special help. The teacher often supplements the drill material given in the text with well-organized exercises on difficult points. Games, charts, graphs, and other devices are used to stimulate interest in the drill work. The pupils are required to give original problems showing the application of the processes that are being learned. As the occasion arises the teacher points out instances of the application of arithmetic in the other subjects of the curriculum. However, no specific provision is made to show the application in social situations of what is learned. Tables of measure are memorized but little is done to make their use concrete and meaningful. Standard tests in the fundamental processes are rarely given to determine the level of pupil achievement.

Level 3

The activities at this level are in general similar to those of the second level, the objectives of the work being to develop speed and accuracy in the fundamental operations, and an interest in arithmetic. The presentation of new processes is logi-

cal and adequate. The practice exercises needed to establish new skills are satisfactory. The review work on processes previously taught is individualized by the use of such standard practice exercises as those of Studebaker, Courtis, Brueckner, and others. However, these exercises are used mechanically, the teacher not recognizing the fact that they must often be supplemented by diagnostic work with pupils who are not making satisfactory progress. The applications of the processes are largely limited to the problems given in the textbook, although as occasion arises the teacher may suggest other applications without giving any exercises dealing with them. The work in denominate numbers is made concrete by means of class exercises involving their application, such as measuring the height or weight of pupils, the area of the floor of the classroom, and similar exercises. Games, charts, graphs, and records of progress on the practice tests are used to stimulate and maintain interest in the subject.

Level 4

The objectives of the work in arithmetic are somewhat broader than those of level 3, since the teacher recognizes that in addition to the ability to perform computations speedily and accurately the activities of the class period can result in the development of desirable social qualities, such as initiative, self-control, self-appraisal, self-direction, and ability to work effectively as a member of the group. To this end the work in the practice periods is so organized that the pupils are led to attack purposefully the problem of improving their ability to compute. Pupil leaders are taught to direct the activities of the class during the practice period. Pupils are taught to locate their difficulties, to appraise their work by comparison of their achievements with standards, to correct their own papers, to record their results, and to construct individual graphs of progress. The review work in processes is individualized by use of the standard practice exercises in arithmetic used in level 3. The teacher pays special attention to the diagnosis of pupil difficulties and organizes the class work in such a way that a major portion of the teacher's time is given to diagnostic and remedial work. In the development of new processes the presentation is logical and complete.

Pupils who need more help than it is possible to give during the class presentation are grouped for special work on their weaknesses. Often they are assigned to superior pupils for assistance. At this level the teacher still stresses the computational aspects of arithmetic. The problem work is limited to the solution of verbal problems contained in the textbook in which the operations are applied. Considerable attention is given to the development of ability to solve these verbal problems. Special exercises on problem solving are used to give the pupils a systematic method of attack in solving a problem. Diagnosis of pupil difficulties in problem solving is used to determine the needs of individuals. The applications of arithmetic in social situations are not stressed except as they are given in the textbook. No attempt is made in any way to relate the work in the arithmetic class to the work in the other subjects, although the teacher takes the occasion to suggest the applications that may arise incidentally. No use is made of reference materials, local situations, or pupil experiences to enrich the applications of the processes that are taught. No attempt is made to provide opportunities for pupils to explore aspects of arithmetic in which they have particular interest, such as the historical development of measurement, banking practices, etc.

Chart for Analyzing Seven Levels in the Teaching of Arithmetic

Source of Control	Objectives	Individual Differences	Diagnostic and Remedial Work	Correlated With Other Subjects	Applications	Organization of Content	Sources of Content of Classwork
Levels 1. Complete teacher control	Speed and accuracy of computation and ability to solve isolated problems	No provision	No provision	No provision	No applications or activities other than those in a formal text	Processes in computation and isolated problem material determined entirely by processes being taught	Limited to textbook
2. Almost complete teacher control; some directed pupil activity	Speed and accuracy in computation; *interest in work*; ability to solve isolated problems and to solve original problems	No provision	No provision	Incidental; no direct provision	Graphs, charts, and devices to create interest; no social applications	Processes are the basis of work; original problems given by children in addition to usual isolated problem material	Textbook, supplemented by games and devices to create interest
3. Almost complete teacher control; many directed pupil activities	Speed, accuracy and interest; real comprehension of meaning of units of measure and their applications	Individualized drill materials, such as Courtis, etc., are used mechanically in reviewing old work; new work not individualized	General diagnosis only in terms of progress in drills	Incidental; no direct provision	Graphs, charts, etc.; textbook problems; some social applications in immediate environment	Standard drill materials; many unit activities; original problems	Textbook supplemented by standard drill materials and a few local problems
4. Pupil leaders direct activities in drill periods under teacher's direction; otherwise there is complete teacher control	Speed, accuracy, interest, comprehension; development of certain desirable social qualities; ability to apply units of measure	Individual drill material used effectively for old and new work; group work	Direct provision for diagnosis and remedial work in processes and problems	Incidental; *correlations are suggested but not followed up*	Many formal social applications; stressing processes; many problems, prepared by teachers and pupils	Standard drill materials; drill activities so organized that pupils direct them; few real social units showing applications in daily activities	Textbook supplemented by standard drill materials; many additional problems prepared by teacher
5. Drill work is socialized; teacher directs pupil activities in social applications of arithmetic	Speed, accuracy; desirable social qualities; enrichment of arithmetic concepts and applications	Individualized drill materials; special reports, topics, etc., for superior pupils	Direct provision for diagnostic and remedial work on processes and problems	Use is made of situations that arise in other subjects, but as part of the arithmetic period	Problems stressing processes, and the use of processes in local life situations, such as school bank projects, etc.	Standard drills; many social units and activities used; local situations	Applications in textbook supplemented by uses of number in other subjects; local social applications used to apply processes; some use of reference materials
6. All applied work is semi-socialized, but carried on under teacher's direction; pupils have no direct share in planning work	Speed, accuracy; social qualities; consideration of the significance of the number system and its place in social progress; functions and uses of numbers discussed	Individualized drill materials; special reports, participation in social activities	Provided as needed	Correlations used when possible; subject organization tends to break down	Process work not stressed; the variety of applications is the basis of the work; computation is subordinate	Activities growing out of large units of study organized by the teacher; excursions; dramatizations	Textbook richly supplemented by activities, projects, and excursions; reference books, etc., widely used
7. All work is socialized; pupils and teachers share in the preparation of units of work which are the basis of the class activities	Participation of pupils in life activities in such a way that self-control, self-direction, self-appraisal and ability to cooperate are developed; comprehension of the social significance of the number system, its functions, and value	Individualized drill materials; provision for consideration of topics of interest to individuals; group work, etc.; special reports; individual projects	Provided as needed	Subject organization as such no longer exists; activities form the basis of classwork	Process work is incidental as needed in the activities in which the class is engaged	Activities growing out of large units of subject matter; independent applications in life situations	Textbook a mere source book of information; supplies data on pupil problems; use is made of other information from any available, pertinent materials or sources

Level 5

The distinguishing characteristic of the fourth level is the excellent type of work done in the processes and the attempt to develop desirable social qualities in pupils, relatively little stress being placed on the possibilities of enriching the work through making clear to pupils the social applications of the processes that are taught. At level 5 the drill phases of the subject are taught in the same way as in level 4. The review work is individualized and new processes are carefully presented. Diagnostic and remedial work are also stressed both in problem solving and in processes. Stress is given to the development of desirable social qualities. At this level special consideration is given to the enrichment of the work in arithmetic through a consideration of the applications of the processes in social situations. The teacher uses the school bank, playstores, the purchase of school supplies, and similar natural situations in the life of the school to show the applications of arithmetic. Verbal problems of the traditional type are used much less than at the other levels, since the teacher believes that pupils will learn to apply arithmetic processes in life situations by practice in applying them in life situations. Pupils are encouraged to suggest local applications of arithmetic. Special assignments such as the preparation of reports or the collection of illustrative data and materials are frequently made. At this level the teacher is still consciously emphasizing the development of speed and accuracy in computation and does not fully appreciate the real social significance of arithmetic. Whatever does not contribute directly to the development of ability in computation is rejected. The processes that are being taught rather than the situations in which they are used are the basis of the classwork. The informational function of arithmetic is therefore not stressed, nor is number thought of as an invention by man by means of which he has brought order, arrangement, and precision into the quantitative aspects of the environment.

Level 6

At level 6 the drill aspects of arithmetic are given a subordinate position, although the work in this phase of the subject is carefully provided for by means of well standardized, individualized practice exercises and systematic diagnostic and remedial work.

The main stress is placed on the function and uses of number, that is, the consideration of the quantitative aspects of life and the methods which man has devised to bring "order, arrangement, and precision" to the environment. The teaching of arithmetic is organized on the basis of large units of study, prepared in detail by the teacher, or prescribed by the course of study. The purpose of the teacher is to systematize the content of the material that is related to the topic being studied and to develop the associated skills, habits, attitudes, and appreciations in their natural setting. The tendency is clearly to break down the compartmentalized subject organization and to show the applications of a particular phase of number in important social situations. Under the teacher's direction a large variety of activities are carried on, much as is now done in the social studies, since arithmetic when taught as it is on this level is a social study of great importance. Excursions are planned; reports are made; situations are dramatized; related material in reference books is assigned and read; the significance and development of such concepts as the measurement of quantity, distance, time, value, area, weight, and volume are considered. The work is all done under the immediate

direction of the teacher. While a definite attempt is made to socialize the work, the socialization is often not real since it is too much in the hands of the teacher and the pupils have almost no part in the selection and planning of the activities.

It is obvious that at this level the concept that the arithmetic period should be used to develop skill in computation and in solving verbal textbook problems breaks down. Under the teacher's direction the pupils consider number as a method of thinking which has been one of the chief factors in the rapid social progress of the past few centuries, and see how number has helped man to systematize quantitative aspects of the environment which otherwise would be chaotic and unorganized. Problem work at this level consists largely in the selection and performance of the computations that would be needed in a particular situation in which the pupil would need to locate and select the essential data himself instead of having it presented to him in an organized manner as is now done in verbal problems.

Level 7

At level 7 provision is made for active pupil participation in the selection of the content of the work in arithmetic and in the organization of the subject matter to be covered. The major units of the work are prescribed by the curriculum on the basis of careful experimental work to determine the most valuable topics or activities from the point of view of society suited to each grade and through a consideration of which the pupils will grow in socially desirable ways. The order in which the topics are taken up is left to the teacher, who guides the activities according to the interests and abilities of the class. Other topics of marked social value which may arise in the course of the daily work may also be made the basis of the class activities.

Pupils and teacher together coöperate in determining the character of the activities to be engaged in by the class. The teacher uses the veto power very rarely and seeks to guide the work toward socially valuable objectives. The teacher believes that this method of organizing the material will result in the systematic consideration of problems, topics, and subject matter that will be within the experience and interests of the pupils. The method of teaching is based on the belief that pupils should learn in natural situations such as they encounter in life itself and should have an active part in the planning and execution of such activities to the end that they may develop those social qualities which are needed in a democracy. Special provision is made for group work under pupil leaders on phases of a subject which are of particular interest to individuals. Much use is made of excursions, projects, construction work and similar activities selected by the pupils under the guidance of the teacher. Little attention is paid to time allotment or subject organization since the work on any topic usually involves the application of the other subjects in many important ways.

Ideally, new processes are taught to pupils as their need arises in carrying out the activities involved in the topic under consideration, rather than according to a systematic plan set up in advance as is done in level 6. Pupils strive whole-heartedly to acquire skills and to learn new processes because they are needed in the class activities.

From a practical point of view it may often be necessary for the review of processes previously taught and the development of the new processes to be carried on independently of the work in applied arithmetic, using the individualized exercises described in level 6. However, it is clearly desirable that the drill on processes should not be completely isolated as might be

necessary under such a plan but should be made to function in the activities in which the pupils are engaged.

At this level the teacher stresses the informational function of arithmetic and the significance of the uses of the number system as a method of dealing with the quantitative aspects of the environment. The materials used in the class are chosen primarily because of what they contribute to these objectives, not because of the computations involved. Arithmetic is considered to be a social subject of major importance rather than a "tool" subject.

INSTRUCTION PROBLEMS IN LIBRARIES OF TEACHER-TRAINING INSTITUTIONS

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The librarian of any teacher-training institution has four separate problems on his conscience:

First—he is responsible for library service to his own institution. This means not only providing adequate material for all courses being offered but adequate service to get these materials used and adequate space for his readers to use them in reasonable comfort and quiet.

Second—he must try to teach his student public the resources and techniques that will make them habitual, independent, joyful users of any library. This is not only to save time for everybody concerned but is designed to give the prospective teacher more reserve power (both spiritual and practical) for the future.

Third—he usually has a group of greater or less size and promise which asks for training as "teacher-librarians." This would entail an entirely different body of material in addition to the other type of instruction, material for the maker and administrator of a library who has first had to learn to be a user.

And lastly—(historically, but first in point of influence educationally) he must make it possible for the prospective teachers under his roof to glimpse the vision of the opportunities open to them in working with a school library as part of their teaching equipment. For no system of school libraries, however perfect, nor however well trained its librarians, can arrive at the educational effectiveness potentially possible to it unless the teachers in the system are minded to make the full use of the opportunities offered.

Obviously all four of these items imply constant provision of opportunities for wide general reading through which general information and literary taste are encouraged, fostered, and developed. This is particularly essential to serve as a balanced mental diet in those institutions where literature on education is likely to predominate and where the four years of training are so often substituted for four years in a liberal arts college. Instead of considering this factor as a separate part of the librarian's responsibility, then, it seems to me rather as underlying all the others—an indispensable principle in all his book selection, service, and instruction.

Fifteen years of work with school organization and administration through school libraries lead the writer to the conclusion that efforts to teach teachers library use and resources have been for the most part fruitless compared to the energy and zeal expended. The chief reason is that we have been teaching technical library methods more than we have applied library methods to teacher-training problems or to teaching situations; have endeavored to give details of library practice instead of forcing situations in which these practices were yielding intimate acquaintance with books; have talked *about* reading instead of having books read.

Reasons for this poor attack have been:

First—the librarian's own nearness to the technical side of the use of the library, and the very evident need for the fundamentals of simple library techniques displayed by the students who flounder so helplessly. Both of these things have tended to throw the technical side of the use of the library into a perspective which is out of focus with their own real importance.

Second—the preparation, even of the school librarian, has included so much detailed material on library administration, that control of method in teaching has usually had to be omitted. In a training center for school teaching it was felt that all students would be taught to use books and libraries as teaching material in the methods courses of their own specialty, when really they have not been so taught except in rare instances.

Third—the meager libraries with which the usual normal school or teachers' college has been equipped. Actual introduction to the library as part of a teacher's background needs a wide variety of types of materials including visual and ephemeral materials, periodicals, and new as well as standard books. This last means "letters" as well as Education (with a large E) for the balance is frequently much too heavy on the pedagogical side, much too light on the cultural. Especially is this a consideration when the student body comes from high school to teachers' colleges and normal schools much more often than from a four years' academic college course with its liberalizing contacts.

Fourth—the absence until very recently of a library in the training school with a trained school librarian at its head. The teacher in training must have observation and experience with children in their daily contacts with the school library. He must see it used for assignments and for both study and pleasure (including browsing), while habits which are likely to persist are being acquired. Student teachers must come to recognize the techniques by which they themselves can stimulate and strengthen these habits in children through having such experiences under intelligent leadership during their student teaching days. The library in the training school has been coming into existence more and more of late. Its success will depend upon how vital it is made in the teaching program, and this means a new piece of technique for critic teachers. It is not enough to have library lists to hand out, nor to suggest the use of the library for observation or even for personal use. Real teaching experience, which includes problems in the use of many books with a class, real ability to give instruction in the use of books at the time when such instruction has meaning for a given purpose, real understanding of the implications in facing different tastes in reading and correcting poor selections by emphasizing good ones, real interest in the reading difficulties children encounter in mastering different types of subject matter which involve different reading skill than that needed to read a simple narrative, real appreciation of the library opportunities for developing life interests and habits of new quality in the children's lives, are all to be in-

cluded if the fullest employment of a practice teaching situation in a training school library with its trained librarian is to yield its full measure.

It would seem, then, that efforts to assist people studying to be teachers to meet a variety of library needs will take a new program of library instruction in normal schools and teachers' colleges. Mr. Kerr has said that the best way for teachers to learn to use a library is to use it thoroughly during the four years of their training in an institution having a well-equipped, well-organized library. He is right, only who will see to it that they *do* use it *thoroughly?* No one better than their instructors. Library use is not a subject to be taught independently. It is a tool to use in all classes. Does any complete faculty have the requisite library skill to stimulate "thorough library use," and is any library ready with instruction materials to back up an earnest faculty effort to make progress in acquiring this skill? Perhaps here and there it is being successfully done. Most of us want more positive evidence that this important need will be more widely met with a definite plan of procedure. What has the critic of present conditions to suggest?

First—that there be a member of each teacher-training institution library staff whose whole time is to be devoted to assisting the faculty in getting the students to know and use the library resources in the institution. This person should have been a school librarian, should be a good teacher, and understand the problems of teacher-training practice schools as well as the parent institution. She should be ready to prepare library instruction materials for students in terms of class problems they are meeting and she should be a right hand to the faculty in making the library connections between their departments and their classes. She should be a right hand to the librarian also, and could do even more, by working closely with the librarian to introduce materials and to smooth out reserve and departmental book problems through increasing the understanding of what it means to try to serve the needs of several hundred students with little help, small appropriation, and limited resources.

She has a big pioneer job whose limit is but the boundary of her own vision of public schools in which teachers, pupils, and librarians all work together to make the work done there full of the richest types of experience in work and in play. Until the teacher helps voluntarily, whole-heartedly, intelligently in stimulating, advising and guiding the pupils, the librarians may work as arduously and as graciously as they can, but they will never alone accomplish the results latently possible in the situation.

Second—that the recommendation made by Doctor Russell at the Boston meeting of the Association of Teachers Colleges and Normal Schools in 1928 should be carried out, i.e., that each state should train school librarians for its own schools in one of its teacher-training institutions, training for each level of which the librarians would be a part. If only one such institution attempted this, not only could better work be done by consolidating scattered forces, but the other schools could be released to try out the first suggestion here set forth. This need is most imperative at the present time, and until calls for libraries exceed the supply, one scholar could care for the need.

Third—that every training school (model or practice school) should have a well-organized school library with a trained librarian, and that the instructional member of the college library staff working closely with the training-school librarian should demonstrate to the student teachers (and faculty until it is well understood) the real meaning of teaching which utilizes the school library as the vital force.

WHAT EXTRA-CURRICULAR ACTIVITIES OUGHT A GOOD SCHOOL NOT TO OFFER?

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Secondary schools which are engaged at all seriously with extra-curricular activities are confronted by a question of growing importance: What activities ought a good school not to offer?

That the question has arisen is due to the enthusiasm which proposals for an extra-curricular program have almost everywhere aroused. Educational literature, institute proceedings, and individual schools are concerned with a tremendous variety of activities, all claiming admission to the high school on the ground that they are authentically extra-curricular. No school need be at a loss for suggestions as to how to keep its students busy in extra-curricular affairs: it need only look about it to find more schemes than it can use. But the school which seeks to choose the best from the long list of possible activities finds itself in doubt. Should it provide harmonica clubs, and airplane clubs, and do-a-good-turn-daily clubs? Ought it to undertake after-school dances and parties? Need it be seriously concerned with lunchroom details and bicycle squads and student courts? Mere physical limitations of time and energy demand the rejection of some of the possibilities. Which ones can be omitted without undue sacrifice?

No one person can hope to answer this question to the satisfaction of everyone else. The host of specific activities to which it applies is so great as to prevent any immediate, detailed evaluation of them all. Even an answer in terms of major types of activities is difficult: it demands the setting up of some sort of measure for judging the relative goodness or badness of each type, and about measures of goodness and badness there is room for endless argument. Yet it is worth while to attempt as definite an answer to the question as we can achieve, if only for the sake of provoking argument. Out of the differences of opinion which are likely to arise at every step there may at least come a critical appraisal of some of our present indiscriminate undertakings. It is in the hope of arousing reflection, rather than with the expectation of reaching a final judgment, that we propose here to set up certain criteria as to what extra-curricular activities a school ought not to offer.

The first step in arriving at any such criteria must be that of setting forth as clear a statement as possible of why a school should have any extra-curricular activities at all. Only as we can determine the aims of these activities in general—what they should be good or bad *for*—can we judge which are less good than others. Hence we begin with a definition of purposes.

THE FUNCTION OF THE EXTRA-CURRICULAR PROGRAM

The function of the extra-curricular program is to furnish a remedy for the shortcomings of our recognized curriculum. We have been devoting special attention of late to two important phases of secondary education. On the one hand we have been attempting to establish valid aims for secondary education as a whole. On the other hand we have been scrutinizing the means

which high-school curricula and courses of study afford us for realizing those aims. When we bring together the results of our study along both these lines, it becomes all too evident that we are not now achieving the aims which we believe to be sound. It becomes evident also that we cannot achieve those aims so long as we adhere strictly to traditional practice. Different methods and materials of teaching and a different environment for learning would both seem necessary before we can be wholly successful. It is this different approach which the extra-curricular program seeks to provide.

The functions of the extra-curricular program, in other words, are residual. If we grant the school's responsibility for providing certain attitudes and abilities, then the content of the extra-curricular program is to be determined by subtracting from the total list those which can be adequately realized in the recognized curriculum, and by considering the remainder as special objectives of the new activities.

But merely to say that extra-curricular activities are intended to remedy defects in the existing curriculum is hardly sufficient. Such a statement gives us, of course, one basis on which to evaluate specific practices: it implies that extra-curricular activities ought to serve the same fundamental purposes to which the school's work as a whole should be devoted. Much more than this a general statement cannot tell us. If we are to say in detail what activities a school need not offer, we must come to some agreement as to the major weaknesses and omissions of the existing curriculum.

WEAKNESSES AND OMISSIONS

These weaknesses and omissions will of course differ from school to school. As our curricular work becomes better adapted to its purposes, moreover, the defects will grow fewer. Hence it is impossible to list for all schools and for all time the specific points with which the new program must be concerned. Yet we may perhaps distinguish a number of common weaknesses of at least temporary importance.

One such weakness has to do with the failure of the curriculum to be of convincing value to pupils. There is frequent criticism of our present system of education on the ground that it emphasizes values deferred to a point at which pupils can hardly recognize them. From the pupils' point of view, school work is likely too often to seem restricted to preparation for a distant future—for college-entrance examinations, for a problematic "job," for a hypothetical citizenship. In many instances the subject matter is doubtless to blame for pupils' failure to recognize its value: it has no immediate meaning for them at the time at which we teach it. In other instances the circumstances of our teaching, rather than the nature of our materials, are at fault. Having decided from positions of authority that this or that should be learned by our pupils, we assume all too readily that the reasonableness of our decisions will be as clear to the pupils as it seems to be to us. We may, indeed, tell them *why* they should learn, in terms of explanations, excuses, or arguments; but we are inclined to overlook the fact that conviction of value comes only rarely through telling. Hence subject matter or methods, one or both, may fail to carry the necessary conviction.

A second weakness is found in the failure of the curriculum to afford a thoroughly comprehensive education. It neglects, for one thing, thorough training in democratic social organization and control. Our traditional school organization is fundamentally autocratic in nature, and we have found as yet no sound method for avoiding a reflection of that autocracy in a large

part of our curricular work. We have, indeed, been able to do something through properly conceived socialization of class activities; but what we have accomplished in this direction has been so largely restricted to small-group activities, and to activities primarily academic and intellectual in character, that there still remains a vast field for further training. The curriculum is unsuccessful also in giving full recognition to individual differences. We have found it necessary to plan our work in terms of groups of pupils, minimum essentials of subject matter, more or less fixed standards for promotion. These things imply serious inflexibility. Though the project method and perhaps other methods offer promise of improvement, we have as yet been unable to master to any widespread extent the techniques which these methods involve. Hence it has seemed desirable for us to adhere in our curricular work to less flexible procedures, which limit the freedom necessary for due attention to individual needs. And again, the curriculum offers relatively narrow opportunities for try-out and guidance. The same considerations which limit our provision for individual needs apply here also. They have prevented us even from making thorough exploration of pupils' interests and capacities, to discover what the whole range of individual needs may be. In all these matters—social training, provision for individual differences, exploration and guidance—there is much reason to believe that the offerings of the traditional curriculum need to be supplemented. Only through the addition of new types of activity which will thus supplement it can we expect to overcome the weakness of the curriculum in its failure to provide a thoroughly comprehensive education.

Still a third general weakness is to be found in the failure of the curriculum to allow adequate experimentation with new methods and new subject matter. If a large part of the curriculum does lack convincing value for our pupils, if the curriculum does fail to afford a thoroughly comprehensive education, then the only abiding cure is to be found in fundamental revision of our methods and materials of teaching. But in most schools such revision appears for the present to be impracticable. We do not yet know how to bring it about, and we do not dare risk values which we are fairly certain of achieving, by plunging the whole of our curricular work into experimental disorder. The curriculum imposes on us a certain obligation to achieve more or less traditional standards. If we are to maintain these standards, we can depart only in limited measure from the methods and the materials which are associated with them.

Other weaknesses than these doubtless exist in our formal curricular work. Individual schools, certainly, are likely to find special defects growing out of their own individual circumstances. But the three defects which we have cited—failure of the curriculum to be of convincing value to pupils, failure to afford a thoroughly comprehensive education, and failure to allow adequate experimentation—may serve to indicate the major types of weakness with which most schools are concerned.

PURPOSES OF THE PROGRAM

What, then, are the purposes of the extra-curricular program? Its major purpose, as we have pointed out, is to provide desirable education of a type not offered by the curriculum; its subordinate purposes are to remedy specific defects in the curriculum. We have, therefore, only to state these defects in positive rather than negative terms in order to translate them into such purposes.

Thus translated, they become: first, to provide a series of educative activi-

ties which shall be of convincing value to pupils here and now; second, to offer opportunities for training in desirable types of activity which may have been overlooked in the curriculum, or which the usual conditions of formal curricular work prevent our undertaking; and third, to allow experimentation with new and promising methods and materials.

These three things, at least, are things which extra-curricular activities ought to do—which they ought to be good *for*—if they are worth admitting to the program of the secondary school. And these three things are not mutually exclusive. The fact that an activity is of convincing value to pupils does not mean that it may not also be undertaken on a thoroughly experimental basis; nor does its experimental nature mean that it should make no definite contribution to our basic educational objectives. On the contrary, every extra-curricular activity ought to fulfill every one of these three aims in order to contribute fully to the purpose of the extra-curricular program as a whole. It must not merely be educative: it must be educative in all of these ways if it is fairly to be considered worth while.

PRINCIPLES FOR JUDGING SPECIFIC ACTIVITIES

Our purpose in stating these aims was to set up for ourselves a basis upon which to judge the goodness or badness of specific extra-curricular activities. Having found such a basis, we should be ready to decide in fairly definite terms upon the types of possible activities which a good school ought not to offer. Each of the aims which we have cited carries certain positive implications. We propose to consider these implications in turn, and to see to what types of activities they apply.

The extra-curricular program should be educative, in the same general sense that the curriculum itself is intended to be educative. That is implied in the fundamental purpose of the program as a whole. If this is true, there would seem to follow from it at least one direct statement as to certain types of activity which a good school ought not to introduce. *A good school ought not to offer an extra-curricular activity which is to be justified solely on the ground of the entertainment that it affords.*

What this means may perhaps be made clear by an example of the type of activity which it condemns. A certain city high school, as a means of illustrating one phase of its extra-curricular work, offered, one day, an assembly program to which friends of the school were invited. With one or two exceptions the program was composed entirely of musical numbers. It opened with a march—"Stars and Stripes Forever"—rendered by the school orchestra as the pupils filed in. Next, duly announced by a pupil chairman, came a song by the Boys' Quartet: "The Bull-Dog and the Bull-Frog." Enthusiastic applause brought forth an encore: "Mighty Lak a Rose." Then followed a girls' chorus, with "Swanee Ribber" and "Ol' Virginny." After the chorus came a group of mixed voices, singing a song of which the words for bass and tenor consisted of "Zoom! zoom! zoom!" The climax of the program proved to be the final number—a rendition of "Under the Double Eagle" by two boys playing two pianos. The uproar of enthusiasm awakened by this double performance was so great as to call forth one more piano number—the "Anvil Chorus," with adaptations.

Perhaps this program was worth while for those pupils who took active part in it. It had required a period of preparation which may have been valuable, and it gave them the educative experience of appearing before an audience. But so far as the audience itself was concerned—and the audience is no less to be reckoned with in an

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assembly program than are the performers —the program would seem to have been at least of questionable value. Every one of the selections which it offered the pupils might have heard—doubtless had heard—more than once at their favorite movie theatre. Every one of the selections, to be sure, they liked. But so far as could be judged by an outside observer, no single number in the whole program did anything whatever to raise their standards of musical enjoyment. Nothing in it was in any real sense new to them. They left the assembly hall in the same state, musically, in which they had come in—all aglow, perhaps, as a result of half-an-hour's entertainment, but with no new thing to look back upon, no type of experience to think about, which would in any sense justify the cessation of normal educational activity in that whole school for thirty minutes.

The question will doubtless arise as to whether it is not part of the school's duty to train pupils in habits of harmless enjoyment, and as to whether this assembly program may not fairly have been considered a phase of that training. Before we deal with this question, it may be well to have before us an example of an activity which is not merely entertaining, but educative also.

As part of an assembly program in a different school, a boys' chorus was to present the "Song of the Volga Boatmen." The pupil-leader of the chorus first came forward and announced the name of the selection. The song was a Russian folk-song, he said, which had been found among the boatmen along the Volga River. He then described, not unskillfully, the river and the men who earned their living upon it, emphasizing particularly the drudgery and monotony of the boatmen's lives. Then he recited the words of the song, in an English translation; and he concluded his introduction by saying that, in their singing, the chorus was trying to do two things: first, to give an illusion of a boat coming nearer and nearer on the river, and finally passing by and moving out of ear-shot, and second, to put into the song a sense of the weariness and monotony that were in the words. That his audience was interested in what he had said was plainly evident in the attention which they gave him. The singing itself was not remarkable, but it did clearly show an appreciation by the singers of what the song was intended to express. One rendition was not enough for the audience: they demanded an encore, and the song was repeated. At the close the leader came forward again, to say that the chorus would like to have all of those pupils who were willing to do it, write out a brief comment on either the song itself or the singing of it, so that the chorus might have the benefit of their criticism.

Do we need to point out the difference between this program and the program offered in the first of the two schools? There was entertainment in the second as well as in the first: the pupils liked the "Song of the Volga Boatmen," and they were interested in the brief explanation which preceded it. But there was more than simple entertainment in this second program. For pupils who had not previously heard the song, there was an introduction to music worth their knowing. For all the pupils, there was opportunity to develop a positive appreciation of this particular song which went beyond the casual appreciation of mere listening. And for those pupils who were interested enough to write out their comments, there was the worth-while learning which may come to anyone who tries to think clearly about his likes and dislikes.

In this second illustration we may find an answer to the assertion that mere entertainment is fairly to be considered an

end in itself for certain parts of the school's work. The functions of the secondary school do include training for enjoyment—that is not to be denied. But they demand training of a sort which will raise pupils' standards, not merely leave them at the level at which the school itself finds them. And the school cannot justly afford to spend time and energy and money upon activities which leave its students purely static. It may properly provide entertainment, but the entertainment can be of a sort which "leads on" to higher standards, and must be of this sort if it is to be thoroughly justifiable.

Though we have drawn our illustrations from assembly activities, it should be evident that the same general principle applies to every phase of the extra-curricular program. Clubs, school social affairs, extra-curricular athletics, pupil organizations, all demand more than simple popularity among pupils if they are to achieve their purpose. The school cannot justify any extra-curricular activity on the basis of its popularity alone.

This criterion is, perhaps, the only one of those we seek which stands forth merely from our general statement of the purpose of the extra-curricular program. To discover others we must examine the implications of the three subordinate purposes.

Consider the first of these purposes: extra-curricular activities should be of convincing value to pupils here and now. No activity should be admitted to the extra-curricular program which does not "have sense" for pupils: this is its obvious implication.

There is but one sure way in which we can count on an activity to "have sense." That is to see that it is provided in answer to a problem which the pupils themselves recognize as their own—a problem pertaining not to purely academic concerns, but to the things in which adolescent boys and girls are interested through the fact of their being adolescents and of their living together in large numbers. An extra-curricular program established by administrative authority is likely to possess one of the very defects which it should seek to remedy: it runs serious danger of failing to convince. The same danger is found in the program which pupils "choose" in the sense that they number 1, 2, and 3 those proposals which they think they will dislike least in a list of possible activities submitted to them. This does not mean that principal and faculty should take no part in the introduction of extra-curricular activities. They may very properly direct the pupils' attention to a problem which demands solution; and they may suggest means of solving it, or (perhaps better) encourage such suggestions from the pupils. But unless the pupils themselves recognize the problem as a problem and want it solved, the new activity must fail of its full purpose. Hence we may set it down as a second principle that *a good school ought not to offer an extra-curricular activity which fails to meet a specific need felt by the pupils themselves.*

As in the case of our first principle we need perhaps to have recourse to an illustration. A certain high school was for a time in charge of a principal who was enthusiastically interested in extra-curricular activities. This principal conceived an elaborate student-government organization, which he proceeded to set in operation almost overnight. He established home-room organizations, a general pupil-organization with an extensive constitution, student police, student traffic officers, a student court. For a time the machinery thus established revolved rapidly and smoothly. Real business was scarce and insignificant; but the newness of the organization made it possible for the faculty to occupy the pupils' attention with interesting discussions of

what might happen if real business should ever arise. In time, however, even this began to pall, and the organization was kept alive chiefly by its own inertia.

Then certain of the older and astuter students began to see possibilities which had not previously occurred to them. They would make business, of a sort. Their first move seemed harmless enough: they announced on the general bulletin-board that Henderson and McGuire had constituted themselves a firm at law, and begged to offer legal insurance at the rate of two dollars and fifty cents per annum, for which sum any student would be assured legal defense in the school court in connection with any and all crimes for which he might be arrested. The announcement by Henderson and McGuire was followed by a similar offer, at lower rates, on the part of Stetson, Phillips, Jones, and Stetson, and by solicitations of business by many lesser fry. Cases began to come into court: the lawyers prosecuted, as well as defended. The matter of "crook lawyers" was argued in assembly; it came before the court itself, and the court ruled that no lawyers might be admitted to practice without having passed certain bar examinations. Henderson, McGuire, and Phillips took and passed the examinations; all the others failed them or declined to take them. The firm of Henderson and McGuire was reorganized to admit Phillips as a silent partner. Business languished—competition had disappeared. Phillips therefore became a runner for the firm: it was his duty to embroil one or more students in trouble, see that they were arrested by the student police, and solicit their patronage of his firm in their defense. Business became brisk once more. But again the assembly considered the matter—this time with a constitutional amendment requiring each person summoned before the student court to plead his own case. And once more the student organization sank into somnolence.

The students who were thus making sport for themselves were undoubtedly learning things. So, in all probability, were those others who witnessed and protested against their doings. But the things which both groups learned were hardly among those which a good school would feel itself justified in teaching them, so that from the standpoint of sound purposes this student organization must have been judged very close to failure.

Consider, by contrast, the development of student participation in a different school—this one a junior high school. A home-room teacher, in casual conversation with one of his pupils, learned that a number of the boys and girls objected to a certain rowdyism which prevailed. There had been a pupil in the school the year before who had been a ringleader in various undesirable doings. He had left the school, but his influence persisted, particularly in the matter of profane and obscene language; and though a good many of the pupils wanted to be rid of the habits which they had formed, they did not know how or where to begin. The teacher brought together all the boys in his home-room for a discussion of the problem. They agreed upon the foundation of a club—the "Knights" of something-or-other, it was called. The club was successful: it nearly, if not quite, stopped the undesirable activities at which it was aimed, and its programs were such that its members had a thoroughly good time. Boys from other grades applied for membership and were accepted. Under the leadership of a woman teacher, some of the girls started a similar club of their own, and the two organizations together soon enrolled nearly all the pupils in the school.

At about that time there arose (or was it adroitly created?) the problem of a school

library. The school had available five hundred dollars for the purchase of a library, but no money for a librarian. If the pupils could suggest a good way for selecting the books, purchasing them, and using the library, they might have them. The two clubs went into session and appointed joint committees, which consulted the English department, drew up a list of books satisfactory to everyone, obtained prices upon them, bought five hundred dollars' worth, installed them in a classroom, established library rules and regulations, appointed a student librarian and a number of assistants, and administered the whole collection.

Other things also these clubs did, in connection with traffic regulations, the conduct of pupils on street-cars, the care of buildings and grounds, the use of the lunchroom. But they added no new activities until they themselves saw the need for them; and in adding new activities they let go none of their hold on those which they had already undertaken.

If a school is to include in its program only activities for which the pupils themselves see a need, it may perhaps never have any such elaborate pupil-organization as that which was described in our first illustration. Nor will it have, perhaps, what may be popularly regarded as a "model" program. But it is likely to have a program every part of which may be of service in meeting the school's fundamental purposes.

The aim of the extra-curricular program to provide activities of convincing value to pupils has a further implication. From it would seem to follow the principle that *a good school ought not to offer an extra-curricular activity which fails to meet a specific need felt by the teachers.*

This principle is important partly because of the nature of most teachers' professional background. The responsibility of teachers for extra-curricular work has thus far received relatively little emphasis. Hence the administrator can count on no specific preparation for the new types of activity. He must expect, indeed, a type of previous experience which will lead many teachers to introduce into extra-curricular work the very defects of rigidity and formalism which the new program seeks to remedy. The immediate cure for this situation would seem to lie in avoiding any demand for the teachers' participation in extra-curricular activities merely on the ground that such activities are generally recognized as desirable. Conviction of value for the teachers, as for the pupils, is likely to come most surely through experience. If each new activity can be presented to them not as part of an evergrowing monument to the principal's personal ambition, but as a possible solution to a specific problem confronting the school, it is probable that many of the difficulties which frequently attend the building up of an extra-curricular program can be avoided.

The teachers' realization of the need for extra-curricular activities is important for another reason as well. Since the extra-curricular program is seeking in part to develop and stimulate pupils' interests beyond the point which is otherwise possible, it must avail itself of everything which may contribute to interest. A foremost factor is to be found in the influence which the teachers' attitude can exert. Given an evident enthusiasm on the part of the faculty, there may be developed among the pupils an interest which will surmount serious obstacles; lacking such enthusiasm, the teachers' participation is likely to degenerate into a routine certainly no more successful than the routine of most classroom work.

If illustration of this third principle is necessary, it may be found in the two types of pupil-organization which we have al-

ready cited. The school which produced the student lawyers need not have failed if the teachers had been ready to capitalize even that sort of random interest. But they, like the pupils, had found the pupil-organization created ready-made for them. They saw no immediate need for it, and their principal desire was to have it remain as unobtrusive as possible. Hence they bent their efforts not toward fostering its growth, but toward opposing any real growth to which the pupils' own interests might have led. In the second school the complex activities which finally resulted developed at the start from the interest of a single teacher. The pupils' interest was also essential, but without the teacher's evident enthusiasm the pupils might still have been merely wanting to change something and not knowing how or where to begin. In this second situation teachers as well as pupils specifically wanted each new feature of the extra-curricular program, and its outcome proved thoroughly worth while.

Turn now to the second of the three subordinate purposes. It is the aim of the extra-curricular program to offer training in desirable types of activity which may have been overlooked in the curriculum, or which the usual conditions of formal curricular work prevent our undertaking.

If this second aim is accepted, then it would seem to follow that *a good school ought not to offer an extra-curricular activity which merely duplicates a part of its curricular work.* This criterion is perhaps less in need of defense than of illustration. From one school is reported a Homecraft Club, composed (by a method resembling faculty requirement) of all ninth-grade girls taking the home economics course, and offering little more than an after-school prolongation of the home economics classes. From another is reported a Study Club, to which are assigned pupils deficient in their class work and pupils who have elected no other activities. From still a third is reported a Gymnasts' Club—a simple renaming of classes in routine gymnasium work. Perhaps it would be fairer to say that such activities as these are not extra-curricular at all; they represent for the most part merely a blind attempt to follow popular fashion in building up an extra-curricular program. But activities of this type occur with enough frequency, in one form or another, to justify their being listed among those which have no proper place in an extra-curricular program.

This second aim carries another implication which can hardly be stated in terms of a definite criterion. The fact that the extra-curricular program should directly supplement a school's curricular work implies the need for varying activities from school to school. In general, the better a school's curriculum and its methods of classroom teaching, the fewer extra-curricular activities will it need of the types which are in common use. Mere frequency of occurrence of certain activities in schools in general affords no necessary argument for their adoption in any single school. Only as a school analyzes its own successes and failures in its curricular work can it determine the soundness of its own extra-curricular program.

We come now to the last of the three subordinate aims. It is the purpose of the extra-curricular program to allow experimentation with new and promising methods and materials. In this aim are implied a number of further criteria, which, unlike the preceding, are perhaps more in need of statement than of illustration. But before they are stated it may be well to consider briefly a certain important bearing which this final aim has upon the nature of the extra-curricular program as a whole.

As we have analyzed its purposes, the extra-curricular program is a frankly experimental undertaking. It seeks to do on an experimental basis what cannot be done within the curriculum itself—that is, to give opportunity for the testing of relatively untried methods and materials, in order to develop a body of procedures which will be of proved value. But unless the results of extra-curricular experimentation directly affect the curriculum itself, the extra-curricular program can offer only a partial and temporary improvement. Merely to add new activities outside the curriculum will not cure the weaknesses of our curricular work: these new activities, once their value has been demonstrated, must be used to modify the curriculum, and hence must become a part of it. So long as an activity remains merely extra-curricular, in other words, it represents at best only a transitional stage in the direction of desirable practice.

This recognition of the experimental nature of extra-curricular work involves, perhaps, a more limited definition than that which is usually attached to the term *extra-curricular*. It would make that term stand for exactly what its derivation may properly imply: activities which are not yet ready for complete acceptance in the school's curriculum. It would not allow the term to be applied to activities which may originally have been experimental—the home-room program as developed in certain schools, for example—but which have ultimately been crystallized into more or less well-defined procedures. The implication is not, of course, that these activities are of little value, but (on the contrary) that their value has been so thoroughly accepted that they are no longer experimental. Hence, in the sense in which we are using the term, an activity ceases to be extra-curricular when it has ceased to be experimental.

With this distinction in mind, we may consider certain implications of the experimental purpose of the extra-curricular program.

One such implication would seem to be that *a good school should not offer an extra-curricular activity which must be bolstered by giving it a place within the daily schedule.* This principle does not necessarily bar the pupil-organization, since that particular activity can hardly be offered at all except in regular school periods. Nor does it apply to school assemblies, so long as they are conducted when there is real need for them and interest in them. But it does apply directly and specifically to the policy of introducing club activities in the daily schedule, for fear that otherwise they may not survive.

The argument against the inclusion of experimental activities within the schedule rests on the need for a definite check upon their success. Extra-curricular activities should awaken whole-hearted interest on the part of the pupils who engage in them —this we have already emphasized. It is a test of the quality and intensity of the interest which they arouse—and a fair test, too—that they should have to compete on equal terms with other sources of interest. Only in the results of such competition, indeed, can we find a sound basis for estimating their success. If we introduce activities in out-of-school time, all the conditions for such a test are present. If, however, we make a place for them in the daily schedule, competition is destroyed. The test to which they are subjected in the latter case is not that of whether in themselves they meet a need which pupils feel, but simply that of whether they seem to pupils less disagreeable than the activities which the schedule would otherwise provide.

It will be objected, perhaps, that pupils are subject to demands upon their out-of-school time which prevent them from tak-

ing part in an after-school program. In many cases this is doubtless true. But the demands in most such cases would seem to result largely from parents' misunderstanding of the purposes of after-schoool activities, or from their failure to realize the value of such activities. The solution of any such difficulty as this can hardly be found in a mere rearrangement of the schedule. It ought to come, if it is to be permanent, from an education of pupils and parents both—from a choice of activities which prove of convincing value to both.

It should be pointed out, however, that this criterion does not demand the permanent retention of new activities on an out-of-school basis. When such activities have demonstrated their value, they may be placed where they belong—as part of the recognized curriculum of the school. As a part of the curriculum they will presumably retain all of their former features; and they may be scheduled, as seems wise, either inside or outside of regular school hours. But until they have demonstrated their value—so long, that is to say, as they are definitely extra-curricular—they should have no place in the schedule merely to protect them against competition.

Much the same considerations lead to a further conclusion: *a good school should not offer an extra-curricular activity which carries credit toward graduation.* This does not mean that a point system may not properly be adopted as a means of preventing undue participation in extra-curricular activities, if such a step seems wise. But it does mean that no incentives should be added by which extra-curricular activities are given a merely artificial advantage over pupils' other interests. The need for a check upon the interest which they arouse demands that so long as they are experimental they should stand completely upon their own values, in respect to the advantages which they offer as well as in the matter of the time at which they occur.

One final criterion comes also from this special aim: *a good school should not include in its extra-curricular program an activity which has become smooth-running from the teacher's point of view.* If the pupil-organization functions without a hitch, if the French Club or the Travel Club or the Dramatics Club is creating no new teaching problems, if the extra-curricular program as a whole represents simply a well-oiled administrative machine, then these activities are no longer experimental. They may, of course, present problems to the pupils who are engaged in them—inded they must do so if they are to be truly educative, since pupils do not learn from activities in which they have reached thoroughgoing proficiency. But the fact that these activities have become thoroughly systematized must mean that for the teachers directing them experimentation has reached a successful conclusion. Strictly speaking, they have become a part of the school's curriculum, and the methods and materials which they have introduced should be reflected in the curriculum.

It is from activities which are not yet systematized that the school should build its extra-curricular program. And such activities, if they are truly extra-curricular, will always present difficulties and perplexities to those who are responsible for guiding them.

SUMMARY

Seven types of activities, then, a good school ought not to include in its extra-curricular program: (1) activities which are to be justified solely on the ground of the entertainment they afford; (2) activities which fail to meet a specific need felt by the pupils; (3) activities which fail to

meet a need felt also by the teachers; (4) activities which merely duplicate a part of the school's curricular work; (5) activities which must be bolstered by giving them a place within the daily schedule; (6) activities which carry credit toward graduation; (7) activities which have become smooth-running from the teacher's point of view. These are the types which may fairly be omitted from a sound extra-curricular program.

And, yet, having set down in positive terms this answer to the question of what activities a good school ought not to offer, we cannot fail to recognize that the answer is a thoroughly subjective one. Perhaps the conclusion which we have reached would be more fairly stated in the form of a question. *Ought* a good school to include these various types of activities in its extra-curricular program? If so, on what grounds will it justify them?

JOURNALISTIC ACTIVITIES IN THE JUNIOR HIGH SCHOOL

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In keeping with other changes that are taking place in modern education, the three R's have not been left untouched. It is said by some educators that these old standbys are being replaced by the three C's—courtesy, candor, and constant activity. In the modern school courtesy is instilled into the youth by association with equals and by precept of superiors. Likewise candor is encouraged by the school of today. Boys and girls are urged to ask the how and the why of things. Also the present-day educators are convinced that constant activity means experience and through our experiences we become educated. Situations in the classrooms have usually been superficial. The elementary school should be deeply concerned with furnishing life situations and utilizing the experiences derived from them as a means of teaching routine and tool subjects.

To place our children in a real life situation and furnish the necessary activity and genuine experience for them, arrangements were made for the 8A class of Webster School to edit the weekly school page of the *Toledo Blade*. This page has been a feature of that paper for some time, but has heretofore been compiled by the *Blade's* own reporter. Since the children of our school are of foreign parentage and live in a Polish settlement, segregated from other nationalities, the need for contact with real American children was felt. To meet this need, seven other schools of our city were invited to coöperate in this project.

A staff consisting of editor-in-chief, managing editor, feature editor, news editor, and business manager was appointed in each school. Others of the class were chosen as reporters to gather news from our own as well as the other schools working on the project. On a day which had previously been agreed upon by all teachers concerned, our reporters, in groups of two, were sent out to the other seven schools. The news which they collected was brought back to the classroom and written up for the newspaper. For the next seven weeks

we received reporters from the other schools as they in turn edited the school page of the *Toledo Blade*.

To prepare for this project a "pep" talk was given by the teacher, but, needless to say, only one was necessary. The children were thrilled with the idea from the start. To further increase their enthusiasm and their desire to undertake this project, the class made a trip to the *Toledo Blade* building, where they saw a daily newspaper in the making.

Such a trip necessitated much planning. A committee of children interviewed the principal concerning an appropriate time for making the trip. Other children called the newspaper office by telephone and made final arrangements. At this point the children felt the need of definite preparation for the trip itself. They voluntarily did much research work in the school library on the subjects of printing and the manufacture of paper. This led them to see that some system of asking questions would be useful if they were to get the very most out of their trip. As a result of this need, "What We Want to Know" sheets were written during the English period and read and discussed during the reading hour. At this time the best questions were chosen and combined into three sheets.

During this visit a guide explained the different phases of newspaper work. The class was encouraged by both teacher and guide to ask any questions they wished. This was one of the real situations which not only furnished practical oral English work but also gave the class direct contact with men of industry and the executives of the institution.

The trip itself actually called many theories of citizenship into practice. The crowded bus on a rainy day gave each child a chance to practise what he had often been told about self-control. One boy expressed the desire to meet personally the editor and the photographer. As his wish was gratified, these contacts were high lights to him and called forth all his poise and dignity. The teacher's theoretical ideas of citizenship were thus made practical by such situations.

Back in the classroom written English was now a necessity. Feature stories of the trip were written and the following, which was voted the best by the class, appeared in the newspaper on "our page" with the rest of the news:

On Wednesday, October 24, the boys and girls of Webster School were happy in spite of the weather, because they were to take a trip to the *Toledo Blade*.

On arriving at the *Blade* they were all eager to learn about publishing a paper. Mr. Stager, the guide, showed them the editorial department and explained to them thoroughly about it. After visiting many other places they finally came to the conference room, where they met the Editor, Mr. Grove Patterson, who thanked them for visiting the *Blade*. He also said that newspaper plants are educational just the same as schools.

At last they reached the place of interest, the pressroom. Here they saw many things. The presses and the great rolls of paper were of greatest interest.

The children went out of the building with many new thoughts about newspapers, business men, and education.

In preparation for our reporters' visits to the other schools, telephone calls concerning definite arrangements for the visits were made by the boys and girls. Upon arrival at the other schools introductions would be necessary, therefore practice to meet this situation was felt by the children to be a real need. Here was not an English book suggestion, where children pretend to be characters in which they have no interest, but a genuine social situation. Thorough preparation for all this was made in the classroom before the reporters

started out. They were encouraged to ask questions about interesting things which they might see or hear.

When the pupils returned from these visits, oral English needed no motivation. Each one had many interesting things to tell. There was much intensive work. The reporters wrote up their news, the proofreaders looked it over, it was read to the class and discussed, and then our editors "cut." The reporters rewrote; again the proofreaders looked it over, and so on until the editor was satisfied. This was not a hardship, however. Desire to see in print on the school page what they had written spurred each one on to write better English than he had ever been known to write before.

When the North Western Ohio Teachers' Association meeting was held in Toledo, it was the opinion of the class that reporters had a place there, so a committee of two went to each session to see teachers as they sometimes appear in places other than the classroom. Another committee went to a meeting of the Toledo Teachers' Association, where Doctor Kilpatrick of Columbia University talked. To be chosen on one of these committees proved to be a sufficient motive for improvement in oral English. The reports brought back to the schoolroom were intensely interesting.

Our staff was invited by the managing editor of the newspaper to bring the "copy" to the office and watch the "set up." The friendly and encouraging attitude of these business men toward the boys and girls made us, as teachers, interested in motivating school work by natural life situations, realize that just such contacts are to be had if they are looked for.

Next came the printed page, which made the finest kind of an oral reading lesson, for the motive was a real one. Much to our delight every contribution had been printed word for word as we had written it. Little squeals of delight and expressions of "Here's my article just like I wrote it," did not take away the "schoolmarm's" dignity nor detract from the reading which was being done. For eight weeks we had at least one live reading lesson each week.

Just when it seemed that our task was finished and we would have to return to our beloved nouns and pronouns, as one child put it, we realized that we must get ready to receive the reporters from the other schools. Meeting them, bringing them to the classroom, and conducting them through the building were real and intensely interesting situations. Here again was another chance for practice in meeting and introducing people.

The last reporter had come and gone and the class was feeling "blue" when some one suggested that since Webster School originated the idea we should show our fellow-workers from the other schools our appreciation for their help and coöperation in this project. Accordingly, teachers, principals, the editors from the seven other schools, newspapermen, Superintendent of Schools, and the Supervisor of Elementary Education were invited to a banquet to be given in our school.

Now was the time to learn all about invitations, for ours were going to real people for a real occasion. The need of a toastmaster and after-dinner speakers gave one more chance for motivating English work. Competitive tryouts, both in writing and in giving the speeches, brought out all the originality and ingenuity of the children. At times, however, in our preparation, the stupendous undertaking seemed almost too much; but the real life situation, the banquet itself, with real people eating real food, inspired the children and they rose to the occasion. It was not until then that we, as teachers, fully realized the need of a natural situation to bring out the best in children. As one after another gave his

talk, we sat almost dazed at the remarkable results.

Preparing a banquet for 65 guests worked no hardships on anyone. The food was supplied and cooked by the class. All plans for preparing the meal were so definitely written that nothing could go wrong. You could have heard a pin fall in the kitchen, and the excellent food served was proof that the silent reading "lesson" of the plans had been well done. All of this was done between the time school closed in the afternoon and six o'clock. This was one banquet that was served on time!

The eighth grade children, assisted by the principal and teachers, escorted the guests into the kindergarten, where all were seated at tables placed to form a "W." Decorations were in the school colors. Love of school and loyal citizenship enabled the seventh grade girls to serve this banquet with all the dignity of waitresses of long experience. This was an ideal place to practise good manners and again every child rose to the occasion.

Our booklet with all the things we have put into it as souvenirs is all we have left except our pleasant memories of learning by doing. The three R's had been taught through the three C's. One of our eighth grade girls told the whole story when she said in her speech at the banquet, "And if you could look into all of our souls you would see there a beautiful feeling, a feeling of being proud, a feeling you cannot know until you do the work we did." This was a feeling of achievement, of success, and satisfaction that the task had been done in the best possible way. The creative instinct had been satisfied.

The results of our work on this project are far-reaching and seemingly never-ending. Out of it have come many desires and already we have started out in many directions. Work on our school paper is now entered into with much more "pep" and enthusiasm. The story of printing is fascinating and the work being done is amazing. This has naturally led to the history of the book with the many possibilities for interesting and profitable work. Newspapers, magazines, and books are being widely read. Of the entire enrollment of the Junior High School, 95 per cent have library cards and do much recreatory reading besides that done for research. The story of the manufacture of paper is leading to the study of different kinds of woods, forests, and machinery. The nearby paper mills make it all the more interesting. As yet we cannot see the end and no doubt the close of the school year will find us with much that could be done.[1]

[1] This idea was considered so much worth while by the school executives and the newspaper men concerned, that it has now been made a city-wide project with thirty-five schools participating.

MERITS OF DIFFERENT PLANS OF TRAINING IN SILENT READING

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SUMMARY OF EXPERIMENT PREVIOUSLY REPORTED

In the issue of the *Elementary School Journal* for February, 1929, there was reported the result of a coöperative teaching experiment in reading conducted in eight schools in San Francisco during the year 1926-1927. In that experiment an attempt was made to determine the relative effectiveness of the Horn *Learn to Study Readers,* Books III and IV, and the McCall-Crabbs *Standard Test Lessons in Reading.* In so far as it was possible to determine by the standard tests used and by teacher preferences, these two very different plans of training in silent reading were shown to be of about the same effectiveness as methods of training in silent reading.

THE EXPERIMENT OF 1927-1928

During the succeeding year of 1927-1928 the writers, the Department of Service, fifteen principals, thirty teachers, and approximately 1200 pupils coöperated in a similar experiment. As in the previous experiment, Professor Truman L. Kelley of Stanford University gave invaluable advice.

Purpose. The purpose was to determine the relative effectiveness and the respective merits of three different plans of training in silent reading. The methods, together with the materials selected, are (a) the McCall-Crabbs *Standard Test Lessons in Reading,* (b) *The New Barnes Readers,* Grades 4 and 5, and (c) Stone's *Silent Reading,* Books IV and V.

Descriptions of the three methods. Each book of the McCall series contains one hundred pages, each page constituting a lesson. There is a selection of approximately one-third of a page, and below this selection are a list of questions to be answered and statements to be completed. In each case four or five responses follow the question or incomplete statement. The pupil's problem is to select the one correct response. The pupils are allowed exactly three minutes in which to read the selection and to enter their responses on the individual record sheets.

The teacher's manual gives clear, detailed directions for conducting the test, discussing and checking the responses, and recording the score. The procedure in checking the responses involves (1) the reading aloud of the question by the teacher; (2) discussion and decision on the part of the pupils as to the correct response with the assistance of the teacher as needed; (3) the checking of the response as right or wrong by the pupil; and (4) the recording of the grade score for the day.

By means of the individual record sheet each child is enabled to see his progress in speed and accuracy from day to day and for each period of ten days in terms of the average of the scores for the ten days.

Stone's *Silent Reading* provides a definite methodology in the fore part of the text. Traditional procedures are abandoned in favor of systematic training for developing skills in silent reading by the use of specially constructed vocabulary and comprehension exercises, informational selections and narratives. Specialized techniques are embodied in the text for realizing the specific training objectives set forth in the suggestions to teachers in the fore part of the book. Detailed suggestions are given for teaching the various types of lessons as follows:

I. Unit exercises for training in accuracy, depth, and speed of comprehension.

II. Vocabulary exercises to increase mastery of word meanings and to develop independence in working out meanings.

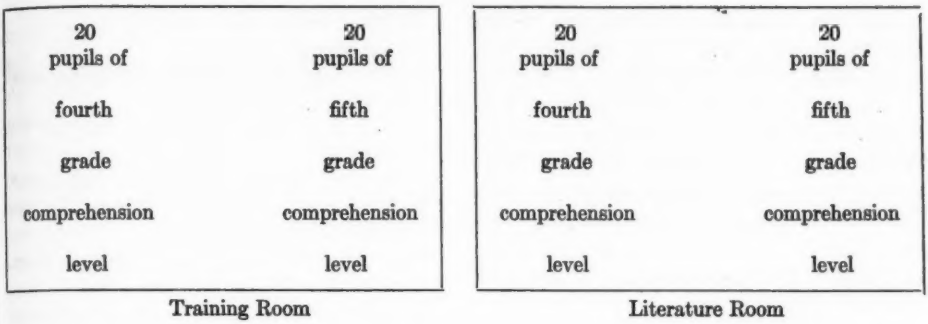
III. Informational selections and exercises for developing skill in the various elements of study reading.
   a. Improving comprehension through reproduction, discussion of problems, and answering questions.
   b. Developing ability to grasp the central idea of a paragraph.
   c. Locating, selecting, and classifying data.
   d. Training in perceiving the author's purpose and organization.
   e. Learning to remember by concentrating upon main points.

IV. Lessons for training in story reading.
   a. Lessons for developing speed.
   b. Lessons for improving comprehension.
   c. Learning to read for pleasure and general information.
   d. Measuring rate and comprehension.

The New Barnes Readers were selected because they are distinctive from the other two plans in the type of material and represent an attempt to combine traditional procedures with some of the newer techniques. A definite methodology and detailed suggestions for teaching each selection are given in the Manual. Much attention is given to word mastery including phonetic training, dictionary work, and preliminary attention to the pronunciation and meanings for a list of words chosen from the selection in each case. The selections are of the literary type and are usually rather long narratives. Following the preliminary drill for word mastery, the method provides for silent reading of the selection by sections, together with discussion or dramatization in the recitation. As a last step the whole or selected parts are read orally. For the succeeding study period definite test and study activities are provided. Provision is made for occasional speed and comprehension tests.

Organization. In each school soon after the opening of the fall term in August, all of the pupils in the fourth, fifth and sixth grades were given the Chapman Unspeeded Reading Comprehension Test by the classroom teachers under the direction of the Department of Service. From the records obtained the Department of Service selected for each school twenty pairs of pupils of approximately fourth grade comprehension level, the two pupils of each pair being of the same sex and approximately equal in chronological age, school grade, and comprehension score. An intelligence test was not used because if two groups of pupils of twenty each are approximately equal in these factors there is a large probability of approximate equality in learning ability. A similar selection of twenty pairs of pupils of approximately equal groups of twenty pupils each of fifth grade comprehension level was made, making two rooms of forty pupils each.

The plan on the opposite page shows the arrangement of the four groups of pupils in the two experimental rooms. The remaining pupils were formed into as homogeneous groups as possible and provided with a modern balanced program in


20 pupils of fourth grade comprehension level
20 pupils of fifth grade comprehension level
Training Room
20 pupils of fourth grade comprehension level
20 pupils of fifth grade comprehension level
Literature Room

reading, but they did not constitute a part of the reading experiment proper.

All of the fourth, fifth, and sixth grade classes had reading during the same period and pupils changed from their home rooms to the room to which they were respectively assigned for reading instruction.

The reading period was 50 minutes exclusive of the time taken for changing from room to room. The period was divided into two half-periods of twenty-five minutes each. Half of each pupil's time was devoted to the specialized training and half to activities related to individual recreative reading, literary appreciation lessons, and audience reading. One teacher, designated as the training teacher, handled both of the training methods, one method for the first half of the period with a fourth and a fifth group of pupils and the other method for the second half of the period with the other two groups. Likewise, the other teacher, designated as the literature teacher, alternated in conducting the recreative type of activities.

By this plan the same teacher used the two experimental methods and neither group instructed by one method was present while the other group was instructed by the other method.

The activities and materials in the literature room were so managed that both fourth grade groups were given approximately the same exposures and experiences and likewise with the two fifth grade groups.

By such a plan of organization an attempt was made to control all of the variables except the two different training methods.

By having fifteen schools and using two methods in each school, we used each of the three methods previously described in each of ten schools.

Tests for measuring progress. As soon as the organization had been effected, the training teacher in each case gave the Stanford Reading Examination to all the experimental groups. Another form of the same was given a week preceding the Christmas vacation period beginning early in December. All three parts of the Stanford Reading Examination are power tests. This examination measures the general function of comprehension and was used to evaluate the relative effectiveness of the different methods in this respect.

In order to determine the relative effectiveness of the three methods in special phases or types of comprehension, the Gates Silent Reading Tests, Types A and C, were also used. Type A measures the child's ability to get the general significance of a paragraph and Type C the ability to understand precise directions. In case it is not possible to use all four of the Gates tests, Professor Gates advises that Types A and C be used.

The tests were administered and scored by the teachers under the direction and supervision of the Department of Service. In order to secure as accurate scoring and tabulating as possible, carefully prepared record forms and checking directions were sent out by the Department of Service. The Director of the Department met with the teachers who were to give and score the tests and went over the standardized procedures with them.

The following is a copy of the mimeographed instructions for giving and scoring the tests:

ADMINISTRATION AND SCORING OF TESTS

Adhere strictly to the printed instructions. Add nothing, omit nothing. Even the smallest deviation might invalidate the results. Absolute accuracy is essential.

See that the pupils are at ease and have the proper equipment before beginning the test.

Permit no interruptions during the administration of the test. Special precaution is necessary in order to insure uninterrupted quiet.

Verify each pupil's age by comparing it with entry register.

List the pupils of your class alphabetically on the form supplied and enter other information as requested.

Preserve all test papers and other data carefully until further instructions.

Each test paper is to be scored independently by two teachers in the following manner:

First teacher:

1. Use red pencil.
2. Enter score at left margin, opposite each test.
3. Score as follows:
   + for right; — for wrong; *O* for omitted.
4. Count and recount the items according to instructions.
5. Enter final score in place indicated, in red.
6. Enter initial of scorer in upper left-hand corner.

Second teacher:

1. Use blue pencil.
2. Enter any change at left of original score.
3. Score as follows:
   + for right; — for wrong; *O* for omitted.
4. Verify the count made by the first scorer.
5. Enter the final score (if different) in blue at left of original score.
6. If no change is made in original score, make blue + after original score.
7. Enter initial of scorer in upper left-hand corner under red initials.

The class record sheets sent in by the teachers were carefully checked by assistants in the research department and all errors which could be detected upon the face of the records were indicated. Sheets containing only occasional minor errors were corrected. Sheets containing a considerable amount of error in evidence upon the face of the records were returned to the schools with instructions to send in as nearly accurate records as possible. Finally, all of the test papers were returned to the Department of Service for reference in cases of records appearing to be unreasonable. A large amount of time was spent by the assistants in attempting to produce compilations of results as free from error as possible.

INSTRUCTIONS TO TEACHERS AND PERSONAL SUPERVISION

Before the classification test was given, a meeting of all principals and teachers concerned was held and the plan of organization explained. At this meeting the instructions and details relating to the classification tests were discussed.

When the formulation of the experimental group of pupils had been completed, a meeting of the thirty teachers of the experimental groups, fifteen training teachers and fifteen literature teachers, was held. Detailed mimeographed instructions

TABLE I

SHOWING MEAN GAINS IN MONTHS AND DIFFERENCES IN GAINS OF PAIRED METHODS (SEPTEMBER–DECEMBER, 3 MONTHS)

STANFORD READING EXAMINATION

School and Teacher	Mean Gains in Months September to December (3 months)				Differences of Mean Gains of the Paired Methods			
	Groups of Initial 4th Grade Comprehension		Groups of Initial 5th Grade Comprehension		Groups of Initial 4th Grade Comprehension		Groups of Initial 5th Grade Comprehension	
	Barnes	Stone	Barnes	Stone	No. Pairs	Difference	No. Pairs	Difference
1	5.5	7.2	2.7	6.9	19	1.7 S	16	4.2 S
2	4.9	6.8	1.9	5.9	17	1.9 S	16	4.0 S
3	3.7	8.2	9.8	7.4	18	4.5 S	16	2.4 B
	Barnes	McCall	Barnes	McCall				
4	5.6	6.7	6.3	7.4	19	1.1 M	18	1.1 M
5	−.6	−.1	−.4	5.3	19	.5 M	19	5.7 M
6	3.1	1.7	2.8	1.9	14	1.4 B	16	.9 B
7	3.7	2.7	7.0	5.6	16	1.0 B	14	1.4 B
	Stone	McCall	Stone	McCall				
8	4.2	8.8	8.0	7.8	18	4.6 M	18	.2 S
9	1.9	5.1	6.1	10.8	17	3.2 M	15	4.7 M
10	1.3	.6	5.8	2.1	15	.7 S	15	3.7 S
11	7.6	1.9	2.5	5.7	15	5.7 S	14	3.2 M
12	4.4	9.0	1.2	8.5	12	4.6 M	13	7.3 M

concerning their duties, responsibilities, and instructional activities were placed in their hands and gone over in group study and discussion.

Soon after the organization had been completed and the experimental teaching had begun in all fifteen schools, a meeting of the fifteen training teachers was held for the purpose of discussing and clearing up any problems which had arisen. A similar separate meeting was held with the literature teachers.

The writers personally visited one or more times all of the experimental teachers and observed their instruction to make sure that directions were being followed and that the plan of procedure outlined by the author or authors of the material in each case was being followed. Any misunderstandings or misinterpretations observed

were taken up with the teacher individually. Teachers having difficulty with a particular method were sent to visit a teacher who was successfully following the method as planned by the author of the material.

The purpose of the supervision was not to increase the effectiveness of the teaching but to secure uniform procedure on the part of all teachers using a particular method in accordance with the directions and suggestions provided in the manuals.

RESULTS AS SHOWN BY THE STANFORD TESTS

The results of the experiment as measured by the Stanford tests are shown in Tables I and II. The mean gain of all the pupils for each initial comprehension level and for each method as shown in Table II indicates that the plan of organization resulted in a normal gain by the Barnes method and a gain appreciably above normal by each of the other methods.

From an examination of the data in Table I, it appears that the Stone plan is somewhat more effective than the Barnes, that the McCall is not appreciably more effective than the Barnes, and that the McCall is somewhat more effective than the Stone. These findings, however, are not consistent and, furthermore, are not consistent with the mean gains shown in Table II, which seem to indicate that the Stone and the McCall plans are approximately equal in effectiveness and that both are more effective than the Barnes. Therefore, it must be concluded that the data do not prove any significant differences in effectiveness of training among the three methods in so far as the function measured by the Stanford Reading Examination is concerned, which is the general function of power or depth of comprehension of words, sentences, and paragraphs.

The range of mean gains on the part of the groups taught by any one method is surprisingly large. As shown in Table I, the fourteen groups using the Barnes material range in mean gains from 9.8 months to —.6 months; the fourteen groups using the Stone material range in mean gains from 8.2 months to 1.2 months; and the eighteen groups using the McCall material range in mean gains from 9.0 months to —.1 months.

TABLE II

SHOWING MEAN GAINS IN MONTHS BY COMPREHENSION LEVELS (SEPTEMBER TO DECEMBER, 3 MONTHS)

Method	Grade	No. of Pupils	Mean Gain
Barnes	4	121	3.7
Barnes	5	115	3.3
McCall	4	145	4.0
McCall	5	142	6.1
Stone	4	146	5.4
Stone	5	123	5.4

RESULTS AS MEASURED BY THE GATES TESTS

The results for the Gates test of reading to appreciate the general significance of a paragraph indicate some probability that the Stone plan is more effective in this function than either of the other two methods, but the evidence is not conclusive. Consequently, the data for this test are not presented.

The data for the Gates test of reading to understand precise directions are given in Table III. A casual inspection of the table in comparison with Table I shows even a wider range of median gains than in the case of the Stanford examination. This is to be expected on account of the lower re-

TABLE III

SHOWING MEAN GAINS IN MONTHS AND DIFFERENCES IN GAINS OF PAIRED METHODS AS MEASURED BY THE GATES TEST OF READING TO UNDERSTAND PRECISE DIRECTIONS (SEPTEMBER–DECEMBER, 3 MONTHS)

School and Teacher	Groups of Initial 4th Grade Comprehension		Groups of Initial 5th Grade Comprehension		Groups of Initial 4th Grade Comprehension		Groups of Initial 5th Grade Comprehension	
	Barnes	Stone	Barnes	Stone	No. Pairs	Difference in gain	No. Pairs	Difference in gain
1	12.4	18.6	9.6	21.7	18	6.2 S	14	11.9 S
2	−5.3	−1.3	−12.8	−4.9	18	4.0 S	16	7.9 S
3	9.4	21.4	9.2	12.0	13	12.0 S	15	3.0 S
	Barnes	McCall	Barnes	McCall				
4	8.9	7.9	−4.8	16.5	19	1.0 B	17	21.3 M
5	7.1	−3.2	14.9	11.4	19	10.3 B	19	3.5 B
6	9.3	15.2	26.1	21.7	13	5.9 M	16	4.4 B
7	26.1	16.6	12.1	11.2	14	9.5 B	15	.9 B
	Stone	McCall	Stone	McCall				
8	2.1	−.4	3.3	1.5	18	2.5 S	18	1.8 S
9	30.3	4.9	17.9	15.2	12	25.4 S	15	2.7 S
10	2.8	.6	7.1	−5.6	13	2.2 S	16	12.7 S
11	24.3	7.5	15.3	12.9	15	16.8 S	17	2.4 S
12	16.3	6.7	15.5	20.6	12	9.6 S	15	5.1 M

liability of the test due to the short time limit of the test.

There is one surprisingly large loss, the case of the fifth grade group using the Barnes material and taught by teacher Number 2. Since a loss is shown by all four groups taught and tested by this teacher, it is probable that an error in timing the initial or the final test was made. If there is such a constant error, it is eliminated in the differences of the mean gains shown in another part of the table.

There are several exceptionally large mean gains, but such gains are possible in a function as specific as the one under consideration.

There are a few inconsistencies. It is very difficult, for example, to explain why teacher Number 5 should obtain a median loss of 3.2 months with the fourth grade group with the McCall method and a median gain of 11.4 months with the McCall fifth grade group. An error in timing could not account for this result because in each school the two groups taught by the same method were seated in the same room

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during the instruction and consequently tested together. It should be noted, however, that the differences in gains for the fourth grade groups and the fifth grade groups in this instance are both in the same direction.

The low mean gains shown for the McCall groups taught by teachers eight and ten may be due to an error in timing. Even if such a constant error is present, it does not affect the correctness of the differences.

In spite of probable discrepancies in the data, the differences in mean gains are consistent and show a very strong tendency in one direction. A strong probability that the Stone plan is more effective in developing ability to understand precise directions than either of the other two plans is indicated. All six differences of the mean gains using the Barnes and the Stone materials are in favor of the Stone material. Out of ten differences of mean gains of groups using the McCall and the Stone materials, nine favor the Stone materials.

The Stone books make definite and systematic provision for developing ability to understand precise directions, while neither of the other methods makes such definite and systematic provision. Therefore, it seems very reasonable that the Stone plan should show a superiority in this specific function in reading. Furthermore, the conclusion is in accord with the principle of educational psychology that a specific skill is realized most economically by definite and systematic training of the right sort. Reading directions and instructions is probably the most common form of work-type reading in life outside the school and is needed at various times in the school. The results of this study indicate the advisability of providing definitely and systematically for training in this type as well as in other types of reading in order to secure the best possible outcomes.

Teacher preference. By the questionnaire method a study was made of teacher preference with reference to the two methods used. The reader will recall that the same teacher taught both methods in each school. Since the corresponding groups taught by different methods by the same teacher were approximately equal in all essential respects, the teacher had an excellent opportunity to judge the two methods. Of the five teachers using the Stone and the Barnes plans, all preferred the Stone. Of the five teachers using the Stone and the McCall materials, four preferred the Stone and one the McCall. Of the five teachers using the Barnes and the McCall materials, four preferred the McCall and one the Barnes. It is clear that the teachers in this experiment prefer the Stone plan to either of the other two and that they prefer the McCall to the Barnes.

The study of teacher preference between the McCall material and the Horn *Learn to Study Readers* in the experiment of the preceding year showed that three preferred the McCall plan, two preferred the Horn, and two valued them equally.

Similar reasons to those previously reported in favor of the McCall plan were stated by the four teachers preferring it to the Barnes and the one preferring it to the Stone. Short lessons with interesting content, the plan of regular testing, and the provision for records of daily accomplishment enabling the pupils to see their progress from week to week were mentioned.

Teachers preferring the Stone material mentioned such points as the following: a wide variety of content, very interesting material, properly graded material, definiteness of purpose, attractiveness of the books and pictures; explicit teaching suggestions, an interesting variety of children's responses and activities.

TABLE IV

SHOWING PUPIL PREFERENCE AND EFFECT OF RECENCY OF USE

	Barnes-Stone		Stone-McCall		McCall-Barnes	
	Barnes	Stone	Stone	McCall	McCall	Barnes
Per cent preferring	46	54	25	75	74	26
Per cent preferring method last used	81	67	68	53	58	75

Pupil preferences. During the second semester the experiment was continued with the training methods reversed. Of the two methods in use in each school, each group was given the material used by its corresponding group the first semester. The original plan was to use the results for second semester as a check upon the results of the first semester; but, unfortunately, the Department of Service was not able to complete the required data resulting from the final tests at the end of the year. But a valuable study of pupil preferences was made possible as a result of the rotation of methods.

A sheet of typewritten instructions for obtaining the desired information was placed in the hands of each teacher of the training methods. Reactions were obtained from 329 pupils who had used the Barnes and the Stone methods, from 299 pupils who had used the Stone and McCall materials and from 251 pupils who had used the McCall and Barnes materials.

Table IV shows the results. If recency of use had had no effect, 50 per cent of the pupils favoring a particular method would favor the method last used. But Table IV shows that such is not the case, indicating that recency of use had some effect in determining pupil choice. In spite of the effect of recency of use shown, the table presents evidence to show that the majority of the pupils using the McCall plan one semester and one of the other plans the other semester preferred the McCall. Apparently, there is not much difference between pupil choice of the Stone and the Barnes materials, although the effect of recency of use has somewhat clouded the evidence with reference to these two plans.

The writer of this section of the report has just read all of the pupils' papers stating reasons for preferring one method over the other. In each of the three sets of papers there are a considerable number containing the same reasons, such as "interesting stories," "more interesting," "do better in it," "learn more," "easier," "harder," "interesting questions."

Probably the determining factors in the pupils' preferences for the McCall plan, as shown in their written statements, are the daily test features and the record sheet which reveals to the child his attainment in rate and accuracy each day and his progress from day to day and also biweekly. Interest in the content was also frequently mentioned. Several pupils said that they learned many interesting things which they did not know before and which helped them in their lessons. Many mentioned the shorter reading units as a reason for

preference for the McCall material. Many mentioned that the McCall method was fun. The newness of the plan also appealed to many.

The most frequently stated reason for preference for the Barnes plan was that of interesting long stories. Other points mentioned by a considerable number of pupils are: interesting poems, questions preceding the story, vocabulary drill preceding the reading and dictionary work. A number mentioned particular stories of special interest. Evidently pupils who did not care for informational reading were inclined to prefer the Barnes over the McCall or over the Stone.

In many of the papers it is evident that the variety of the Stone material as to content and plan of procedure appealed to the pupils. Such points as speed drills, matching exercises, games, making things, interest information, interesting stories, the "Little Dictionary" in the back of the book, and the pictures were mentioned.

In comparing the two methods which the pupil had used during the year, there were only a few comments made showing any dislike of the method not preferred.

In comparing plans, all of which appear to make a satisfactory appeal to the great majority of the pupils, the factor of pupil preference probably should not have large weight, although it should be considered and methods and material disliked by an appreciable number of pupils should not be used.

This study of interest factors has substantiated the findings of other studies to the effect that factors determining the degree of interest of different children vary greatly. Those who preferred the Barnes or the Stone plan over the McCall evidently found other factors more satisfying than the daily testing and record plan and a few even expressed a dislike for this feature. No doubt these pupils did not make good showings in attainment and progress in the McCall tests. Some pupils preferred short units, other pupils preferred long units, while still others preferred the variety of length of units in the Stone books to either the short units of the McCall books or the long narratives of the Barnes books. Some were attracted to the McCall or to the Stone over the Barnes because they liked the informational units, while others preferred the Barnes because they did not like informational units. Some preferred the uniform daily procedure of the McCall plan while others preferred the varied procedure of the Stone.

Finally, it should be pointed out that the development of varied interests in reading is an important objective in the reading program of the school and that the total program in reading and in subjects having a rich reading content should make ample provision for the establishment of catholicity of interest in reading desirable materials.

CONCLUSIONS OF THE TWO YEARS OF EXPERIMENTATION

The results of the two years of experimentation may be summarized as follows:

1. During the first year of experimentation the Horn *Learn to Study Readers* and the McCall-Crabbs *Standard Test Lessons in Reading* were used. The results of the Stanford *Test of Paragraph Meaning* and the Chapman-Cook *Test of Speed of Reading* indicated that the two plans were about equally effective as methods of training in silent reading. A study of teacher preferences showed little relationship between teacher preference and results shown by the tests. The two plans appealed about equally to teachers using both plans.

2. In the second year of experimentation the results of the Stanford Reading Examination were inconclusive with reference to the relative effectiveness of the Mc-

Call-Crabbs *Standard Test Lessons in Reading,* Books III and IV, Stone's *Silent Reading,* Books 4 and 5, and the *New Barnes Readers,* Grades 4 and 5.

3. The results of the Gates test of reading to understand precise directions indicate a large probability that the Stone materials and methods are more effective in this important function than either the McCall or the Barnes materials and methods.

4. The teacher preference was decidedly in favor of the Stone materials and methods over either the McCall or the Barnes materials and methods. Teachers using the McCall and Barnes usually preferred the McCall.

5. A study of pupil preferences indicated that each of the three plans was preferred by large numbers of pupils, but a larger percentage of the pupils using the McCall plan preferred it to the method paired with it than was the case with either of the other two methods.

6. The study of interest factors affecting pupils' preferences substantiates the conclusions of other studies that different elements are determining factors in the preferences of different children. The very factor which makes a strong appeal to one pupil may make no appeal to another pupil.

7. The main determining interest factors for each of the three plans were: (a) for the McCall, the daily testing and progress record features and interesting content; (b) for the Stone, variety of interesting types of units as to content, form, length, responses, and objectives; and (c) for the Barnes, interesting long stories.

THE PRESENT STATUS AND FUTURE POSSIBILITIES OF THE PROJECT METHOD IN PUBLIC SCHOOL TEACHING—II[1]

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ADVANTAGES IN APPLICATION OF THE PROJECT METHOD

The advantages of the project method were ranked in the same manner as were the difficulties. From this ranking the relative importance of the advantages were determined in the same manner as the difficulties. Table VI, Ranking of the Advantages of the Project Method, indicates a total frequency of 367 first rank advantages, or more than twice the number of the first rank difficulties. In the difficulties it was noted that *difficulty in completing project* was a phase of the factor, *inadequate time.* Likewise, in Table VI (5), *pupils are more interested* is a phase of the factor (1) *enthusiasm for work.* The difference of these two factors is primarily that of intensity. Both are expressions of whole-hearted purpose. Table VI shows the average number of first rankings of advantages to be slightly more than three for each report, while the average number of first rankings of difficulties is approximately one and one-half for each report. This average number of first rankings is found by dividing the total first rankings by 121, or the number reporting.

Table VI sets forth the greatest advantages by first place ranking in the following order: (1) *enthusiasm for work* has a frequency of 62 first rankings; (5) *pupils are more interested,* 44; (7) *deals with life situations,* 42; and (4) *develops leadership,* 35. It is significant that the order of importance of these four by frequency of first rank is the same as that derived by weighting as indicated in Table VII. It will also be noted that the total frequency of advantages checked is 1,021, with a total weight of 3,775. Comparing these totals with the totals representing the frequency and weight of difficulties, which are 614 and 2,150, respectively, we note that the advantages of the project method by frequency of ranking is 66 per cent more than that of the difficulties, and that the weight of advantages of this method is 75 per cent more than the weight of the difficulties. This is evidence that those actually engaged in teaching and supervision of the project method see marked advantages in its use. They do not, however, consider that the project work in the grades assists greatly in cultivation of a scientific attitude of pupils, or in relieving the teacher of the problem of discipline. A comparison of these findings with the intent of these people in the teaching profession to continue and extend the project method confirms our assumption that project method is succeeding. (See Table VIII.)

THE QUESTION OF THE WIDER USE OF THE PROJECT METHOD

Questions five, six, seven, eight, and nine of the questionnaire, tabulated in Table VIII, were for the purpose of determining the attitude of teachers toward the continuance and wider use of the method. The

[1] From a study submitted in partial fulfillment for the Master of Arts degree in Education at Colorado State Teachers College. The first part of the article appeared in the November issue of this magazine.

TABLE VI

RANKING BY ADVANTAGES IN APPLICATION OF THE PROJECT METHOD BY 121 TRAINING TEACHERS, SUPERINTENDENTS, AND TEACHERS

Advantages	Frequency by Rank					Total Frequency
	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	
1. Enthusiasm for work	62	18	4	9	7	100
2. Teaches lesson of self-control	17	22	11	11	6	67
3. Teaches lesson of self-reliance	20	29	10	10	6	75
4. Develops leadership	35	20	10	13	5	83
5. Pupils are more interested	44	25	12	9	6	96
6. Discipline is shifted to group	7	13	16	5	10	51
7. Deals with life situations	42	18	14	7	1	82
8. More learning takes place	18	22	12	8	3	63
9. Better learning takes place	26	14	10	5	5	60
10. Children learn to do things	22	12	21	7	10	72
11. Learning is better retained	27	18	11	9	4	69
12. Teaches art of coöperation	17	26	12	13	10	78
13. Cultivates scientific attitude	10	14	8	12	3	47
14. Encourages expression of opinion	19	21	19	12	6	77
15. Pupils learn to organize material	1					1
Totals	367	272	170	130	82	1,021

teacher's preparation for the use of the method and also the attitude of supervisors and co-workers were included. Question (5) *Do you intend to use project method in your teaching this year?* has a return of 116 *Yes*, and 2 *No*. In answer to question (6) *Do you intend to make a wider use of it?* 84 reported *Yes*, and 28 reported *No*. The attitude of supervisors and co-workers toward project method is very satisfactory, 102 teachers out of 111 reporting a sympathetic attitude. Reference to Table VIII, questions eight and nine, shows that the group ranks high from a standpoint of professional training and reading. No reports were included as data for this investigation if neither professional training in project work nor the reading of books on project method had been accomplished by the one reporting. All of the 121 reports used in this investigation indicate professional ability to some extent in judging project method from the standpoint of its use in public school teaching.

Does the present extent of the use of the project method affect teachers' intentions toward an extended use? What effect does professional training in project method have toward a wider use of the method? Table IX shows a second distribution of the returns on questions five, six, seven, eight, and nine on the basis of the grouping in Table I. This table shows that 49 of the first group of 56 reporting the project method *used often* intend to make

TABLE VII

WEIGHTING BY RANK THE ADVANTAGES OF PROJECT METHOD

Advantages	Weight by Rank					Total Weighting
	Rank 1 Weight (5)	2 (4)	3 (3)	4 (2)	5 (1)	
1. Enthusiasm for work	310	72	12	18	7	419
2. Teaches lesson of self-control	85	88	33	22	6	234
3. Teaches lesson of self-reliance	100	116	30	20	6	272
4. Develops leadership	175	80	30	26	5	316
5. Pupils are more interested	220	100	36	18	6	380
6. Discipline is shifted to group	35	52	48	10	10	155
7. Deals with life situations	210	72	42	14	1	339
8. More learning takes place	90	88	36	16	3	233
9. Better learning takes place	130	56	30	10	5	231
10. Children learn to do things	110	48	63	14	10	245
11. Learning is retained better	135	72	33	18	4	262
12. Teaches art of coöperation	85	104	36	26	10	261
13. Cultivates scientific attitude	50	56	24	24	3	157
14. Encourages expression of opinion	95	84	57	24	6	266
15. Pupils learn to organize material	5					5
Totals	1,835	1,088	510	260	82	3,775

a wider use of the method, while but 24 of the second group of 47 using the method occasionally report such intent. This table also shows that a greater proportion of the second group have had no professional training in project method than is found in the first group. This indicates that those teachers having had most professional training are making most use of the method. This confirms the conclusion that those with the best professional background for the teaching by project method are making a more marked success.

INTERPRETATION OF PROJECT

One of the greatest difficulties in securing usable data for a study of the project and the project method is the varied interpretations given to these terms. Some use it in the broad inclusive sense, others make a narrow interpretation of the terms. The investigation made by submitting 32 activities is summarized in Tables X, XI, XII, and XIII.

Table X lists eight constructive-type activities to be accepted or rejected as projects and shows the returns from the 121 returned and checked questionnaires. This table indicates a frequency of 747 in the *Yes* column and 109 in the *No* column. To put it another way, 87.2 per cent agree that the eight activities are projects, and 12.8 per cent contend that they are not. It is interesting to note that activity (1) *Building a school coal shed which leads to an interest in a study of forests, woods, lumber, nails, tools, transportation,* of the list has the highest sanction. This is prob-

TABLE VIII

RETURNS ON QUESTIONS FIVE, SIX, SEVEN, EIGHT, AND NINE SHOWING INTENT OF TEACHERS AND SUPERVISORS TOWARD CONTINUANCE OF PROJECT METHOD, ALSO PROFESSIONAL TRAINING AND READING

Question	Yes	No
5. Do you intend to use project method in your teaching this year?	116	2
6. Do you intend to make a wider use of it?	84	28
7. Is there a sympathetic attitude toward project work by supervisors and co-workers?	102	9
8. Have you had any professional training in project work?	93	22
9. Have you read any books on project method?	116	2

ably due to the continued interests following the building of the school coal shed, which makes the activity somewhat more complex. The marked discrimination which is made between (3) *Telling the story of a circus by cutting and arranging the models,* and (2) *Making a products map of South America to assist in geography work,* is difficult to understand. Twenty-seven of those reporting the map work as a project could not subscribe to cutting and arranging models as a project. This very aptly indicates the teachers' inability to utilize children's interests and purposes in their teaching. Certainly, it is hard to imagine a more vitalizing and worth-while project for young children.

Table XI lists eight problem-type activities. The frequency of *Yes* here decreases to 511, and the frequency of the *No* increases to 290. Here 63.7 per cent include the problem-type activities as projects and 36.3 per cent reject them. Under the problem-type of activities it is difficult to understand why there should be such a wide discrimination between (8) *Investigating the cause of dew and hoar frost,* and (3) *Gathering data to prove that the cost of living is decreasing.* Perhaps the social science teacher had no difficulty in visualizing a project in an investigation of living costs, but was somewhat confused in imaging clearly how to direct an investigation of dew and hoar frost. Just the opposite condition would confront the nature-study teacher. Without doubt, this factor entered into the problem of checking the activities of the questionnaire as projects.

Table XII lists the findings on eight drill-type projects. The greatest rejection is found in this type. The frequency of *Yes* decreases to 196, and *No* increases to 584, or 26.4 per cent accept and 73.6 per cent reject the drill-type projects. The drill work in preparing a spelling lesson has the acceptance of 13 and the rejection of 83. This activity stands lowest in acceptance of any of the activities of the four types shown in Tables X–XIII. In this type of activities the practicing of writing for a definite objective has the highest acceptance. It is difficult to interpret the reason for this other than the fact that objective activity is more in evidence in the writing process than in the practicing of spelling.

Table XIII lists the findings on eight appreciation activities as projects. Here the frequency of *Yes* is 266, or 34.4 per

TABLE IX

FINDINGS OF TABLE VIII DISTRIBUTED BY GROUPINGS OF TABLE I

Questions	Group 1 The 56 using project often		Group 2 The 47 using project occasionally		Group 3 The six using project rarely		Group 4 The 12 not reporting	
	Yes	No	Yes	No	Yes	No	Yes	No
5. Do you intend to use project method in your teaching this year?	56	0	44	0	4	2	12	0
6. Do you intend to make a wider use of it?	49	5	24	18	3	3	8	2
7. Is there a sympathetic attitude toward project work by supervisors and co-workers?	50	1	40	4	4	2	8	2
8. Have you had any professional training in project method?	47	8	32	12	4	2	10	0
9. Have you read any books on project method?	55	0	46	1	4	1	11	0

TABLE X

INTERPRETATION OF WHAT CONSTITUTES A PROJECT BY 121 TRAINING TEACHERS, SUPERINTENDENTS, AND TEACHERS

Constructive Type	Yes	No
1. Building a school coal shed, which leads to interest in a study of forests, woods, lumber, nails, tools, and so forth	108	5
2. Making a products map of South America to assist in geography work	103	6
3. Telling the story of a circus parade by cutting and arranging models	76	24
4. Making a sled that it may be enjoyed during the coasting season	91	16
5. Constructing an Indian tepee for dramatization	96	13
6. Making drawings to tell the story of the Pilgrims	87	18
7. Making a dress for a new doll	88	13
8. Stenciling curtains which are to be a Christmas present for mother	95	14
Total interpretation, Constructive Type	747	109

TABLE XI

INTERPRETATION OF WHAT CONSTITUTES A PROJECT BY 121 TRAINING TEACHERS, SUPERINTENDENTS, AND TEACHERS

Problem Type	Yes	No
1. (9) Finding out why smelteries and steel mills are located at Pueblo, Colorado	78	26
2. (10) Determining why Colorado grows so many sugar beets	73	27
3. (11) Gathering information to prove that the cost of living is decreasing	80	23
4. (12) Finding out how the observance of Thanksgiving came about	62	38
5. (13) Determining why more rainstorms occur during summer afternoons than mornings	59	39
6. (14) Finding out why Andrew Jackson was called "Old Hickory"	41	58
7. (15) Examining maps to determine the greatest railroad centers	64	37
8. (16) Investigating the cause for the formation of dew and hoar frost	54	42
Total interpretation, Problem Type	511	290

Note: Numbers in parentheses refer to numbers used in the questionnaire.

cent, and of *No*, 509, or 65.6 per cent. *The listening to a phonograph record preparatory to a music recognition contest* receives the acceptance of 50 and the rejection of 52. This is the highest acceptance in the appreciation-type. *Reading stories of pioneers of your own country* has but twenty acceptance, and a rejection of 72. This is the lowest in acceptance of any of the appreciation type.

It is noticeable that the highest percentage of agreement of project falls in the constructive type, and the lowest in the drill type. It is very evident, therefore, that one field which needs attention sadly is that of the repetition work which, of necessity, must be utilized a great deal in the learning process. Drill is a natural way of learning, and it can be entered into in a whole-hearted, purposeful way if, through suggestion, the learner can be led to set up definite objectives to be reached. It is here that individual instruction and individual objectives work to best advantage, but nevertheless, that involves project method. One who has observed the zest of children's repetition in accomplishing a desired result cannot question the possibility of organizing drill work in school in such a way that children will enter into it whole-heartedly.

Table XIV shows that 48 subscribed to the first definition of project, which embodies a narrow interpretation of the term. A separate checking of the questionnaire of these 48 shows, however, that but two of the 48 accepted all of the constructive type projects and rejected all others of the list. Likewise, of the 63 subscribing to the second definition, which is the broad interpretation of the project, but six accepted all the 32 activities listed in the questionnaire. To attempt to justify the checking of the activities on the basis of the interpretation by questionnaire acceptance leads nowhere. For this reason no attempt was made to show by table the relation of the difficulties encountered in applying the project method to the broad and narrow interpretation.

TABLE XII

INTERPRETATION OF WHAT CONSTITUTES A PROJECT BY 121 TRAINING TEACHERS, SUPERINTENDENTS, AND TEACHERS

Drill Type	Yes	No
1. (17) Pronouncing spelling words that practice may be had before the lesson	13	83
2. (18) Mastering the forty-five addition facts for special recognition	27	73
3. (19) Fixing in mind the names of the countries of Europe	14	83
4. (20) Using the dictionary to become proficient in looking up words	34	65
5. (21) Practicing writing that the letter in answer may be better than the one which was received	39	62
6. (22) Repeating a poem to fix it in one's mind	17	78
7. (23) Practicing a difficult passage of music that it may be played well	33	64
8. (24) Writing a name several times in order that it may be recalled	19	76
Total interpretation, Drill Type	196	584

Note: Numbers in parentheses refer to numbers in questionnaire.

SUMMARY

In summing up the findings of this investigation, the following facts are very significant:

1. Eighty-four of the 116 reporting the use of the project method in teaching indicate their intention of making a wider use of the project method. Of the 56 reporting the *often use* of this method, 49 expect to make wider use of it. This shows that 81 per cent of those reporting the use of the project method intend to continue and extend its use, and that 89.3 per cent of those who now use the project method often have like intentions. This is a bit of objective information which gives hope to those who sponsor the method.

2. The present use of project method, as indicated by the 121 reporting by questionnaire, shows that geography ranks first, industrial arts second, English third, and civics fourth in the amount of use of project method. It is also shown that this method is least used in physiology, music, spelling, writing, and reading. In other words, those subjects which involve the constructive and problem type of project rank high, while those which represent the drill type and appreciation type of project rank low.

3. The advantages of project method are shown to far outweigh the disadvantages, the greatest of which were found to be *inadequate time* and *inadequate preparation of the teacher*. These disadvantages, in part at least, are remediable. It is also shown that there are far more advantages of great weight than disadvantages. Twelve of the listed advantages rank higher than any disadvantage except the two above mentioned. By both frequency of mention and by weighting the advantages are shown to be more than 66 per cent greater than the difficulties. The advantages of greatest importance are reported to be: *enthusiasm for work; pupils are more interested; deals with life situations;* and *develops leadership.*

TABLE XIII

INTERPRETATION OF WHAT CONSTITUTES A PROJECT BY 121 TRAINING TEACHERS, SUPERINTENDENTS, AND TEACHERS

Appreciation Type	Yes	No
1. (25) Reading stories of pioneers of your own country	20	72
2. (26) Listening to phonograph records preparatory to a music recognition contest	50	52
3. (27) Watching a squirrel crack nuts because of interest in animal's ways	27	68
4. (28) Studying the beauty of a picture because you enjoy it	31	65
5. (29) Listening to the reading of lyric poem because you appreciate the beauty of rhythm	27	69
6. (30) Feeding the birds that they may become tame	53	49
7. (31) Listening to a humorous story to get the point	24	71
8. (32) Enjoying the stereoscopic views of the country you have been studying	34	63
Total interpretation, Appreciation Type	266	509

4. There is no general agreement, among those reporting the use of the project method, as to what constitutes a project. The highest agreement is found in the constructive type. The large majority reject the drill type of activity as project. There is objective evidence, from the interpretation of the project by those checking the reports, that they do not utilize children's interests to the degree that they do adult's interest. It is evident that projects are more difficult to determine outside one's field of interest.

5. Few of those checking the activities and the definitions of project show exact consistency in the two markings. Only six subscribed to all 32 activities as projects, despite the fact that 63 accepted the broad interpretation of definition.

INTERPRETATION OF THE FINDINGS AS THEY THROW LIGHT UPON THE ULTIMATE OBJECTIVES OF THE STUDY

The ultimate objective of this investigation and study of the project method is to determine, through the analysis of the difficulties, advantages, and present trends in its use reported by those actually engaged in its application, (1) the future possibilities of the project method in public school teaching, and (2) what recommendations should be made for its wider and wiser use.

The future possibilities of the project method in public school teaching depend largely upon the success or failure which attends its use. The educational theorist may show that the method is sound, that the essentials of the method are identical with the essentials of reflection, that it is in perfect harmony with the philosophy of education which now dominates the public school system, but if the teacher fail in the application of this method, the cause of project method is lost as a method in public school teaching. We are forced to admit that as a people we are pragmatic. If a method does not get results, it must be supplanted by one that does. The impatient public will not take time to analyze the factors of failure and the teacher will

TABLE XIV

INTERPRETATION OF WHAT CONSTITUTES PROJECT BY DEFINITION BY 121 TRAINING TEACHERS, SUPERINTENDENTS, AND TEACHERS

Question	Yes	No
1. Are you one of those who believe that a project is a relatively complex activity which is worked out through objective activity?	48	39
2. Do you consider any whole-hearted, purposeful act carried to completion a project?	63	40

find great difficulty in defending a method differing greatly from traditional procedure.

For this reason the difficulties of the project method should be analyzed by training school teachers and supervisors that the teachers going forth into actual service will be cognizant of the true meaning and limitations of project work.

The difficulty of *inadequate time* for the project method is greatly increased in the minds of teachers and superintendents, because the project method means to many of them only the project of the constructive type. It is very evident from the findings that the constructive type of project is receiving the most attention. This is the type of work that requires more time than any other and therefore accounts, to some extent, for the feeling that the project method consumes too much time. The truth is that in many types of work it is an obvious time-saver. Surely a definite objective and a whole-hearted purpose would not increase the time of learning anything. Even in the constructive type of project, if we were able to measure all the learnings that are taking place, the chances are that there is more learning than under the regular routine. The factors of *associate* and *concomitant* learnings discussed by Doctor Kilpatrick [2] must be taken into consideration if we are to judge rightly the learning. Would a definite goal of accomplishment set up by a child in improving his writing increase the required time for writing? It would probably lead to the desire on the part of the child to take more time, but one cannot imagine the actual learning as taking more time under such motivated conditions. The demands for more time by the project method are usually due to extravagances in the matter of equipment, which are often uncalled for, or to *the teacher's failing to create* situations where the pupils purpose to do what is good and necessary for them to do. If the teacher can lead the children to accept for their purposes what is best for them, there will be plenty of time to do more by the project method than is now done by routine.

The *inadequate preparation of the teacher* has been ranked as second among the difficulties of the project method. Certainly there is no method that will so soon lead a teacher to feel her limitations and inadequate preparation. There is no method which requires the thought, planning, and foresight that the project method demands. The book method is so easy in comparison—and, one might add, so lifeless. For this reason, far more preparation should be given to the project method, which is to be used, if we are to judge

[2] Kilpatrick, W. H., *Foundations of Method.* Macmillan Company, 1925.

from the findings, which indicate that 75 per cent of the teachers are intending to make a wider use of the method. This trend is also recognized by superintendents and school administrators, who know that better results have attended the alignment of school work with the dominant interests of children. Evidence that our schools are making use of this method to a marked degree is clearly indicated by the analysis of 23 city and state courses of study made by Mr. Jones,[3] which shows that the project method of procedure ranks second as a method for the presentation of social sciences. He also shows, by an analysis of 128 catalogs of universities and teachers' colleges, that but 5.5 per cent of the courses offered in method are project courses.[4] This is evidence that in proportion to the need there is not sufficient training to meet the expected use as indicated by courses of study. It is not enough to suppose that the teacher out in service will get it and apply it. The schools that are training teachers should lay a right foundation for the interpretation of the method. Method should be right both psychologically and philosophically. It is the teacher-training school that should see to this, for the average teacher will not break the chains of traditional method unless his training rebels against such methods. One making changes in method needs a firm background in fundamentals by which to justify them.

In view of these facts there is justification for a required course in the project method in teacher-training institutions. This is the surest way of remedying this difficulty; and if the method is a fundamental principle, a method of methods, to be applied in the evaluation of all school procedure, it will prove the most highly professionalizing course for the teaching profession. It will also develop a demand for more professionalized subject matter and in this way add to the scholarship and resourcefulness of the teacher.

Third in rank of importance of the difficulties, *a few do most of the work,* is a difficulty in project work which is a serious drawback to group projects. On the other hand, this is a no greater factor against the method than the advantage, *develops leadership,* is a factor for the method. The observant teacher has noticed that this tendency to lead is contagious and often, as in the game of life, the unresponsive child is led to push ahead because of competition. It is often too true, however, that children of far unequal ability are grouped in project work where it is beyond the power of some to achieve successfully in comparison with the others. This should not be allowed and the trained teacher will arrange group projects so that this condition will not often occur. In group projects, however, this is a factor that may prove a great difficulty even with the most efficient teacher. Much could be said here in favor of the individual project and the need of understanding this phase of the project method as well as the group project. Life situations demand coöperation but they also demand individual planning and executing. The teacher who sees project work and the project method only in the light of group activity and group purposing is but half prepared for carrying out work of this kind. The factors of *a few do most of the work* and *could not enlist all in the project* are genuine difficulties of group project work and must be recognized. On the other hand, all group work must have a leader or leaders; and, if each child's activity is provided for, the child should be led to wish what

[3] Jones, William C., *The Professional Preparation of Teachers of the Social Sciences in the Secondary Schools.* Unpublished Master's Thesis, Colorado State Teachers College, 1925.
[4] *Ibid.*

is best for him to do and participate in the work with a purpose.

The fact that advantages had a high frequency of mention, and the far greater number of first and second rank importance, led to the conclusion that those who reported were succeeding in the use of project method. This evidence is confirmed not only by the greater weight of advantages over difficulties but also by the report on their intentions to extend its use. *Enthusiasm for work* stands in the first rank of advantages, with a higher frequency and weight than any disadvantage. The teacher who knows how to guide the enthusiasm of genuine purposeful activity could wish for nothing better than great enthusiasm. The experienced school superintendent looks for this as an index to high class work.

Deals with life situations is a marked advantage of the project method and will be the strongest factor in extending its use. We must not forget that it is this factor which brings the school and home close together. Projects are reported at home with glee, and bonds of satisfaction are formed, not only by the child but by the parent also. There is nothing which will build up the morale of a school more quickly and firmly than to center the activity of pupils in some project of vital interest to the community. The evidence from the questionnaire returns is strongly in favor of the advantages over the difficulties, and for a continuance and extension of the project method.

As was stated in the preface of the thesis, one aim of this study and investigation was to determine if the difficulties in the application of the project method were due primarily to the narrow interpretation of what constitutes the project and the project method. Due to the fact that there was such a marked inconsistency in the checking of the activities and the interpretation of the project by definition, as shown by Table XIV, no deductions were made. It has been shown that the highest agreement is found in the constructive type, and yet in this type there is inconsistency. It is very evident that among teachers and supervisors using the method there is no general agreement as to what constitutes a project. It has been pointed out that only six of the 63 accepting the definition that *a project is a wholehearted activity* accepted all 32 activities listed for checking. This is evidence of a confused view or, at least, an inability to see how some activities can be wholehearted and purposeful. The broad interpretation of the project and project method is important to its further and most effective use, if it is to function as it should.

CONCLUSION

In this discussion of findings as they throw light on the ultimate objectives of the study, it has been shown: (1) that the success or failure of the project method will be determined by the success or failure which attends its application; (2) that the most important difficulties can be attacked by directing its use to fields outside the constructive type project; (3) that the project method should show more and better learning if we were able to measure the associate and concomitant learnings; (4) that more adequate preparation of the teachers is needed to combat traditional routine procedure; (5) that the highest rank difficulties are in a large measure remediable; (6) that the factors of greatest strength for building up a wholesome community interest is that this method *deals with life situations* and thus enlists the interest of the home; (7) that one of the needs most essential to the promotion of a common understanding in method work is a common interpretation of the terms, project and project method.

THE CLEARING HOUSE

CHRISTMAS PROJECT

With the coming of Christmas, the conversation of the children turned mostly to Santa Claus and what he would bring them. Gradually we decided that Christmas was a time for giving as well as receiving. The question arose as to whom to give. Why, to the people whom we love—to mother and father, sister, baby, etc. Now what would mother like? From the varying responses, such as silk underwear, gloves, etc., we finally decided that she'd like nothing better than the work of our own hands, since she loved the little things we made in school and took home to her.

What to make with our limited school materials was a momentous question. It was finally solved by a small child who suggested that his big brother the year before had made his mother a calendar. So we all made calendars for her. Harold suggested that Father writes in his office (his father is an accountant) and so he thought "fathers would like a blotter"; and since sister and brother read, bookmarks were appropriate for them. It was not difficult to decide on baby's gift—a toy was the unanimous decision.

After settling the needs of the immediate family, it did not take them long to add to their list of giving Christmas cheer the sick and the poor. They suggested the making of toys and picture books to send to the sick children in hospitals. They collected and mounted their own pictures, clipped them together, made a cover (crude but none the less acceptable because of the spirit with which they made them) and I mailed them to the Bronx Hospital, New York.

Unanimously they thought of decorating their room with Christmas greens, candles, wreaths, and pictures, making enough to add to the picture books and to take home.

From my own collection of Christmas pictures (which is an unusually good one), they gave many oral compositions. The growth and spontaneity of their expression was amazing. This was probably due not only to the continued effort on their part in the practice of oral expression but to the response within themselves in the satisfaction of a felt need to express themselves.

Values of Activity

I. Ethical.
   - A. Spirit of giving and sharing discussed.
   - B. Thoughfulness of others.
   - C. Discussion of making gifts brought out wholesome respect for manual labor.

II. Practical.
   - A. Decision as to kinds of gifts.
     1. Father—blotter.
     2. Mother—calendar.
     3. Baby—toy.
     4. Sick children—toys, pictures, books.
   - B. Decision to make gifts.
   - C. Decision to utilize material on hand.

III. Esthetic.
   - A. Decorated room with pictures, wreaths, and candles of their own making.
   - B. Decorated tree.

IV. Organization.
   - A. Planned Christmas parties and celebrations.
     1. For school.
     2. For another grade.
     3. For own group.

V. Coöperation.
   - A. Worked together with whole-hearted joy and delight.

VI. Creative expression through the medium of

A. Oral English (used later as reading). Original.

1. Riddles.

I am green all the year round.
There are candles on me
And there are toys on me.
What am I? Christmas Tree.

Sometimes I am long,
Sometimes I am short.
At Christmas time I am hung up in the house.
What am I? Stocking.

I am very bright,
I give much light.
At Christmas time I am put in the windows.
What am I? Candle.

2. Three-sentence composition.

Santa Claus came last night.
He left me a top.
It was just what I wanted.

3. Dreams.

I went to bed very late last night.
I woke up very early.
I found the toys Santa left me.
They were just what I wanted.
He brought me a teddy bear, a doll and doll's clothes.
I was very happy.

I dreamed I went shopping for Christmas.
I bought a toy for a sick child.

I dreamed that I went to see Santa Claus.
He asked if I was a good child.
I said, "Of course I am."

4. Wishes.

I wish Christmas were here.
I want to see my lovely toys.

5. From pictures.

Look, look, here is Santa.
Watch him take his toys out of his bag.
He is going to give them to George if he is good.
Santa Claus is here tonight.
Little Mary is in his arms.
He is telling her to go to bed and he will leave her all the toys she wants.

6. From toys.

Billy brought a toy Santa to school which he made himself. The following given by the children tells how he made it:

See, see what Billy made.
He made it out of an apple.
He used match sticks for his arms and legs.
And cotton for his head, his whiskers, and his beard.
Why, Santa Claus, of course.

7. Telephoning.
   a. For tree.
   b. For wreaths.

B. Written English.

Letters of thanks.
   a. To Mother and Father.
   b. To Santa Claus.

C. Oral Reading.

Without special phrase or word drill.
Teacher's letter of thanks to each child.
Children's letter to Santa Claus.

D. Silent Reading.

E. Art.

1. Drawing and coloring.
   a. Picture books made.
      (1) Free-hand drawing of Santa's reindeer, toys, etc.
      (2) Pattern drawing of same.
   b. Cutting.
      (1) Picture books made with free-hand cutting.
      (2) Picture books made with pattern cutting.
   c. Modelling.
      Santa's toys, etc.
   d. Construction.
      Toys (jointed).
   e. Printing.

F. Music.

Christmas songs and carols.

READING

I. Oral Reading.

I wrote a "thank you" letter to each child for his Christmas remembrance. Hard as I tried to simplify the wording, it was a little difficult to do so and the words and phrases were somewhat beyond the stage of development of some of the children. But the earnestness and zeal with which they tackled the deciphering of their notes assured me of the worth of this bit of vitalization of school life. After they read their own notes they exchanged with each other. I did not have any special word or phrase drill for I wanted to test and see how much carry-over there was of the work of the months before. The amount was astounding and gratifying.

The following are some of the notes:

Dear Geraldine,

Thank you very much for the boudoir cap. It is very, very pretty. Did you pick it out?

Love
from
Miss Kallen

Dear Bobby,

The handkerchiefs are lovely. How did you know I wanted some? I like them very much.

Thank you,
Miss Kallen

II. Silent Reading.

As the activity progressed, the urge to read about it (both silently and orally) quickened. The following sentences were distributed to the children. They drew, modelled, or cut what the sentence called for. The choice of medium of interpretation was left to the children. The comparison of results caused interesting comments from them. A few examples are:

Make Santa Claus
Make a big green bell
Draw the toys you want Santa to bring you
Make a big yellow Christmas star
Draw Santa with a bag on his back

In connection with the making of the gifts the following were printed:

A Merry Christmas
A Happy New Year
For Mamma
For Papa
With Love
From
For Sister
For Brother

In connection with the silent reading they attempted many other words. One could hardly believe that these children could not print or did not know a letter at the beginning of the school year.

III. Measurement of Knowledges of Vocabulary.

A. Reading vocabulary given by the children. (These words constitute the desires of the 33 children present for Santa to give them for Christmas.)

electric train	jingle bell
cart	automobile
rubber boots	choo choo train
books	plasticine
puzzles	jumping-jack
baby doll	papoose
blackboard	big doll
motor cycle	bicycle
steam shovel	skooter
table	twin dolls
skiis	slippers
dishes	house
erector	ironing board
carriage	overshoes

B. Speaking vocabulary worked in as reading vocabulary.

Christmas	fireplace
Xmas	chimney
Santa Claus	toys
sledge	
reindeer	
stockings	

Miriam Kallen,
Brookline, Mass.

PROPERTY OF
OLEAR HAVEN PUBLIC SCHOOLS

ANTI-COLDS PROJECT[1]

The teaching of hygiene may be divided into the teaching of health knowledge, the development of desirable health attitudes, and the establishment of proper habits of health. The first phase mentioned is very simply achieved: regular study and recitation periods and simple "fact teaching about health" will guarantee its mastery. The second phase, attitudes, takes more skillful teaching, yet it, too, may be accomplished in regular daily periods if the pupils are interested, and especially if the teacher's example and enthusiasm are high. It is the third phase, health habits, which refuse to conform to set periods and which offer a real challenge to the school.

Knowing that school attendance is usually somewhat irregular during the months of December and January, and realizing that much of that irregularity is due to colds, the teachers of Crown Hill School decided to attempt an anti-colds project during these months.

The teachers' aims in this project were to develop better health, to stimulate social-mindedness, and to encourage self-reliance in the habits of positive health.

The work was based on health knowledge, but "telling" was kept at a minimum and "doing" was emphasized. An attempt was made to keep the activities of the children as free and self-directed as possible.

Wall charts were made for each room and each child's "cold" condition or his freedom from "cold" was recorded daily. The charts were made and mounted by older pupils. Each chart corresponded to a sheet from the teacher's register for the month. Just before dismissal each afternoon, a monitor removed the chart from its hook on the wall and called the roll. Each child responded as his name was called by stating the color which represented his "cold" condition for the day and the monitor checked him with that color. A red check was used to denote freedom from cold, blue was used to indicate a slight cold, and black showed a bad cold or absence from school because of a cold. The teachers seldom commented on a child's statement of his "cold" condition, but the children watched one another's records closely and absolute fairness was insisted upon by the children themselves. Each red check counted three points, each blue counted one point, and each black counted no points. Checks were totaled at the end of the month and points were figured. Each child competed with each other child in his room and the rooms competed with one another to see which room could have the highest average point score.

Following are some of the activities used to develop the anti-colds project:

The first of December the sixth grade class in English composition wrote letters to the King Company Anti-Tuberculosis League, and to the Metropolitan Life Insurance Company asking for booklets on colds, their prevention and cure. The best letters were selected and mailed to these places. When the literature was received, it was distributed in all the rooms of the school. "Colds" literature was used to correlate silent reading, oral reports, and composition.

Spread of colds was studied. A check was made on clean handkerchiefs daily. One boy's mother sent an old clean sheet. This was torn into 14-inch squares and a piece was given to each child who had no handkerchief. Later other clean white cloths were sent by different mothers and these were cut up and distributed as needed. Those who coughed badly were asked to remain at home until better, and others with slight coughs were encouraged

[1] This project was carried out at the Crown Hill School, Seattle, when the author was principal of that school.—Ed.

to form the habit of guarding their mouths while coughing and were seated separately as far as possible.

The school nurse, Miss Myhre, gave a talk on colds, their causes, prevention, cure, and of the seriousness of colds.

The sixth grade room was divided into four groups. Each group elected a leader. Each group was given the opportunity to fill a designated section of the blackboard with anti-colds slogans and rules for one week. Leaders held pep rallies and rehearsals and each group put on a fifteen minute anti-colds program during the month. These programs were not at all forced. Each group under the guidance of its leader tried to outdo all other groups. There was a good deal of enthusiastic participation.

The composition class wrote original limericks on the subject of "Colds."

The relative value of "health knowledge" versus "health habits" was stressed. Part of the hygiene test for the month was health practices as shown by attendance and well-being during the month.

The relationship between cleanliness and health was studied and a daily inspection of hands and teeth was made.

Monitors checked on each person when going out-of-doors to see that caps, coats, and rubbers were worn. The names of any children who put pencils or fingers into their mouths were checked.

Those who remembered and practiced all the health rules without being told or reminded were given a star on the citizenship chart each day for self-reliance.

The only objective measure of the effectiveness of the project was in its result upon attendance during the two months in which it was conducted. The per cent of attendance in December, 1928, at Crown Hill was 90.9, while the average for the elementary schools of the city during the same month was 89.0. The per cent of attendance at Crown Hill for January, 1929, was 96.3, while that for the elementary schools of the city during January was 94.2.

While a comparison of the attendance in the winter of 1928-1929 with that of 1927-1928 is more or less disturbed by the effects of the flu epidemic of 1928-1929, it is interesting to note that the attendance at Crown Hill was slightly better for both December and January, 1928-1929, than it was at the same school during those months in previous years, the percentages being as follows: December, 1927—90.2; December, 1928—90.9; January, 1928—94.0; and January, 1929—96.3.

The increased gain in per cent of attendance for January in both of the above comparisons might be interpreted as indicating that the project was just getting under way in December and the results of the improved health habits were being more strongly manifested in January.

J. Edward Petite, Principal,
I. I. Stevens School,
Seattle, Wash.

AS REPORTED

THE ATLANTIC CITY MEETING

The Department of Supervisors and Directors of Instruction of the National Education Association will hold its winter meeting in connection with the convention of the Department of Superintendence as usual. This convention will be held in 1930 at Atlantic City from February 23-28.

President Underwood has arranged for two regular programs of the Department of Supervisors. That scheduled for Tuesday, February 25, will be devoted to the Third Yearbook, which will be presented by Dr. J. Cayce Morrison and members of his committee. This Yearbook deals with the methods employed by supervisors in the field in solving their problems. Copies of the Yearbook will be published in advance of the meeting, so that members will have had an opportunity to examine the text before taking part in the discussion.

At the meeting on Wednesday, February 26, there will be four speakers. Professor W. C. Bagley, of Teachers College, will discuss teaching as a fine art and Professor Frank N. Freeman, of the University of Chicago, will consider it from the point of view of scientific procedure. Miss Maybell Bush, of the State Department of Education in Wisconsin, will outline the principles which should guide in all the work of supervision. Mr. Arthur Dondineau, of Detroit, will explain the nature of an effective supervisory organization in a large city.

The annual luncheon will be held on Tuesday, February 25. The first vice-president of the Department of Supervisors, Miss Elizabeth Hall of Minneapolis, will have charge of the arrangements and the program. There will be a series of informal addresses.

No hotel in Atlantic City has been designated as headquarters of the Department of Supervisors, but some of the officers will have rooms at the Shelburne and meetings of the Board of Directors and Executive Committee will be held there. The program of the meeting will be printed in full in the next issue of this magazine, and all members will receive copies in advance of the meeting as usual.

THE UNIT OF INSTRUCTION

Among the cities which are at present developing programs on the basis of units of instruction are Seattle and Baltimore. Judging by the reports of their programs as they are presented in the bulletins of the two cities, it appears that Seattle is following in general the procedure laid down by Professor Morrison of the University of Chicago, while Baltimore is inclined rather toward what is known as the activity unit.

In the *Seattle Educational Bulletin* for October we find standards for unit planning as presented by Miss Helen M. Reynolds, director of the kindergarten and primary grades, as follows:

1. The unit provides opportunity for the learning of some large portion of subject matter in the course of study arranged for the group.
2. The unit finds its point of departure in the worth-while interests, needs, and experiences of the group.
3. Basic experiences necessary for learning are already within the child experience or can profitably be arranged for by the teacher.
4. The teacher-leader is fully informed on the subject matter before introducing the unit of work to the group.
5. All possible means of extending experiences of the group have been thoughtfully canvassed by the teacher and the possibilities

tentatively organized in her own mind before the project is launched with the class.
6. The usable elements in the group's past or present experiences are utilized in the introductory questions.
7. Children are helped to formulate their own problems to the extent possible at their age.
8. Excursions, if needed, are planned with the children, definite problems being outlined with the teacher.
9. Other concrete means of gaining experience are utilized—plays, pantomimes, puppet shows, maps, graphs, drawings, models, etc.
10. The talents and needs of individual pupils are considered in giving opportunity to carry out individual projects that arise in working out any plan.
11. The teacher considers her own planning tentative. Thus valuable suggestions of children may be utilized as they arise in the process of working out the unit.
12. Provision is made for the learning of the needed vocabulary in connection with the concrete experience. This includes listing and recording new words or phrases.
13. Records of the experiences by means of reports (oral and written) or drawings provide summaries of the steps in gaining enriched experience.
14. The compilation of a bibliography of books read by the class and individuals serves as a review of the field of knowledge involved.
15. The results of learning are recorded in a book or a play to be presented to another group.
16. An analysis of the activities involved in the carrying out of the unit of work made by the children with the teacher aids in the desired mastery of the subject matter. Children are helped to mastery by a consciousness as to the portions of the course of study in different subjects which the project has helped them acquire.
17. Whenever need for drill arises, the teacher provides the needed exercises.
18. Provision is made by the teacher for utilizing newly discovered leads in planning future units of work.
19. Children are encouraged to follow up outside of school newly developed interests through being aided in other individual projects after the group passes on to another field of study.

In the Baltimore *Bulletin of Education* for June will be found an account of the work of the experimental centers in which unit instruction is being worked out, together with a number of illustrations. The following items are included in the reports of activities from the various schools:

1. Length of time required?
2. What unit or problem are you working on?
3. How was the unit initiated? How did it progress?
4. What materials were used?
5. What references were used
   a. By teacher.
   b. By children.
6. What activities contributed to the main unit?
7. To what unit did the present one lead?
8. What were the outgrowths
   a. In habits and attitudes.
   b. In subject matter.

THE ENGLISH COUNCIL AND THE *ELEMENTARY ENGLISH REVIEW*

The Elementary English Review, which is edited and published by C. C. Certain of Detroit, Michigan, has recently been adopted by The National Council of Teachers of English as their official organ in the field of elementary school English. Membership in elementary school English in the Council now carries with it a year's subscription to *The Elementary English Review* without additional charge.

Negotiations were completed this fall, and the September and October issues of the *Review* carry the imprint of The National Council of Teachers of English.

The Elementary English Review will publish official papers of the Council dealing with various aspects of elementary English, such as composition, reading, spelling, grammar, literature, and auditorium and library work.

Since its first issue, almost seven years ago, *The Elementary English Review* has been the only periodical dealing exclusively with the teaching of English in elementary schools. Its circulation extends throughout the United States, Hawaii, Virgin Islands, and the Philippine Islands.

In addition to adopting the *Review* as an official organ, the Council is further developing its organization by the appointment of a committee on elementary school English to plan a program of activities in this field. Elementary school teachers desiring to become members of The National Council of Teachers of English should address their applications to 4070 Vicksburg Avenue, Detroit, Michigan. The annual dues are $3.00, which includes copies of all publications by the Council and a year's subscription to *The Elementary English Review*.

CHILDREN BECOMES *THE PARENTS' MAGAZINE*

The name of *Children, The Parents' Magazine* has been changed to *The Parents' Magazine*. The policy of the publication will remain unchanged. As heretofore, the editorial content will deal exclusively with (1) the care and training of children from crib to college; (2) family relationships and home life; (3) the management and equipment of homes in which there are children.

FILMS SUITABLE FOR CHILDREN SELECTED BY NEW BUREAU

A non-commercial film estimate service which will select from current motion pictures those suitable for children has been organized, according to announcement made recently by Nelson L. Greene, its organizer and director.

A corps of qualified reviewers all over the country have agreed to volunteer their services to this new organization, called The National Film Estimate Service. The Service issues its monthly list as to the suitability of films for children under fifteen years and for youths from fifteen to twenty; it also makes recommendations as to the interest of films for intelligent adults. These are issued monthly, in both *The Parents' Magazine* and *The Educational Screen*.

Judgments on sixty-seven pictures were published in the July issue of *The Parents' Magazine*. Of these only thirteen are recommended for children of less than fifteen years, and only twenty-four are recommended for adolescents from fifteen to twenty years of age.

Affiliated with The National Film Estimate Service is The Motion Picture Committee of the Women's University Club of Los Angeles, of which Mrs. Laura O. Vruwink is Chairman. This committee has the opportunity of previewing Hollywood productions before they are released.

Mr. Greene pointed out that the Service is working absolutely independently of the motion picture industry. It accepts no subsidy nor even free passes to motion picture theatres.

ELLA VICTORIA DOBBS FELLOWSHIP FOR RESEARCH IN EDUCATION

For the year 1930-31, Pi Lambda Theta offers a fellowship to a woman who wishes to devote herself to research in education. This fellowship is to be known as the Ella Victoria Dobbs Fellowship of Pi Lambda Theta. It carries a stipend of $1,000, $900.00 of which will be paid in two equal amounts. One hundred dollars will be due when the final obligations have been met.

Qualifications. The candidate for this research fellowship shall have at least the degree of Master of Arts from a graduate school of recognized worth. In addition she shall have shown notable skill in teaching and significant accomplishment in research,

and she shall have definite plans for further research.

Obligations. The acceptance of the fellowship implies the obligation on the part of the scholar to devote herself unreservedly to study or research as outlined in her application; to submit any proposed change in her plan to the chairman for approval; and to send to the chairman at least two reports of her work, the first, not later than January 15, giving a statement of her work which will satisfy the committee that she is pursuing the research indicated in her application. The second report shall be made upon the completion of her year's work. This latter report shall be in printed form as previously agreed upon with the committee.

The Committee regards the acceptance of the fellowship as creating a contract requiring the fulfillment of these conditions.

Applications. Each applicant should submit:

1. A record of her formal education.
2. A record of her professional activities.
3. Evidence of previous research.
4. A physician's statement concerning her health.
5. A list of the persons whom she has asked to write directly to the Secretary in support of her application. Among those asked to write shall be two women who will send to the Committee a careful, confidential judgment of the personality of the applicant.

Theses, papers, letters, etc., submitted by the applicants, will be returned if postage is sent for the purpose. Confidential letters sent to the Committee will not be returned.

A personal meeting with a member of the Committee will be of great advantage.

Applications must be made on a blank form which will be supplied on request by the Secretary of the Committee on Award, Delia E. Kibbe, State Department of Public Instruction, Madison, Wisconsin. This blank must be filled out and submitted with all supporting papers and letters not later than January 1, 1930.

THE READER'S GUIDE

MODERN SCHOOL PROCEDURES

To assist teachers in applying to their daily work the findings of educational philosophy and psychology Doctor Mossman, of Teachers College, has written a handbook of procedures.[1] The treatment is both interpretative and practical. By means of illustrations drawn from both school experience and out-of-school experience, the reader is aided in grasping the meaning of the principles laid down and in seeing their bearing upon such situations as are commonly to be met in public schools.

The book as a whole falls into two main parts. Chapters I-V are general, while the remaining chapters, except the last, deal with various school studies. The final chapter is devoted to a discussion of "The Teacher's Part in the Educative Process." To use terms now seldom heard, the book deals with both general method and special methods. It is, however, quite as much a treatise on the curriculum as it is a guide to the procedures of the teacher. Indeed, it may be taken as a good example of the modern approach to the problems of teaching. The author is more concerned about what the pupils shall do than about how the teacher shall conduct herself.

In the chapters dealing with the school subjects, the social studies are given precedence. The three aspects of experience to be provided are contact with the physical world, contact with people, and contact with the work of the world. The organization of the school program to furnish these will obviously result in a "fused course" rather than separate courses in geography and history. Centers of interest for each grade are proposed. Language, reading, and number each have chapters to themselves. Music, literature, and art are handled together and treated from the standpoint of helping children to like them. Industrial arts, health, and various other aspects of the school program are omitted.

This book will be helpful to teachers who are students of their work and wish to adjust their programs in the light of newer theories. The reorganization called for is relatively moderate and can be carried out under ordinary conditions. An excellent introduction by Professor Bonser will assist the student in getting the author's point of view.

THE CONCEPT OF METHOD

Recent writers on educational method have in the main proceeded on the assumption that since learning is specific and varies in kind, what is needed is a "battery of techniques," not general principles. Professor Wynne opposes this tendency. In an elaborate exposition he sets forth and defends a single concept of method which he believes teachers should be guided by in all of their relations with pupils.[2] Accepting purposeful activity as the true type of educative experience, he finds five practical aspects in which skillful teaching may be manifested. These are: (1) the selection of undertakings; (2) independent work; (3) class meetings; (4) provision and selection of materials; and (5) estimation of progress, methods, and conditions.

About half of the space at the author's disposal was devoted to theoretical analysis

[1] *Teaching and Learning in the Elementary School.* By Lois C. Mossman. Houghton Mifflin Company, 1929.

[2] *General Method: Foundation and Application.* By John P. Wynne. Century Company, 1929.

of the concept of method. The remainder was used in setting forth practical suggestions concerning each of the five aspects enumerated above and in giving concrete illustrations of actual school work. We learn that the author has been at work for some years on the problem of method and has previously published two brief presentations of his findings, namely, *Principles of Educational Method* (Globe Book Company), and *Principles of Education for Beginning Teachers* (Clarion Publishing Company, Farmville, Virginia). The present discussion is adapted to advanced students. Only such would have the experience and training necessary for abstract discussion or the interest required in pursuing it. Such students will find the author's treatment stimulating. As an offset to the current tendency toward separate and isolated attacks, often of a mathematical character, upon various and sundry teaching problems, this sustained exposition of a central viewpoint should be welcomed. The fact that the unthinking will be tempted to seize upon the "five aspects" as a new set of formal steps and follow them in conducting daily lessons is no real argument against it. The scope of the treatment is wide enough to warrant considering the whole a philosophy of education rather than merely a philosophy of method.

In order to fit his book for class use the author has prefaced each chapter with study questions and followed it with an unusually long list of annotated references.

ON TEACHING ENGLISH AFTER TWENTY-FIVE YEARS

About twenty-five years ago two volumes on the teaching of English appeared at about the same time. Each was competently done and, though differing in detail, the two treatments supported each other in presenting an orderly and reasoned view of the course in English through both grades and high school. The influence of these books, the one by Messrs. Carpenter, Baker, and Scott, and the other, by Percival Chubb, has been immense. They have been employed as texts in innumerable classes and have been carefully read by almost everyone who has essayed to speak or write on the teaching of English since their appearance.

The volume by Mr. Chubb has now been rewritten.[3] While the author still maintains his original viewpoint, he finds much to say that no one could have thought of in 1902 and he omits much that is no longer in point. The intimate quality of the book is preserved. It is still the expression of a genial, hearty man who looks out on his world and finds it on the whole good. If sane and sensible advice from an older and more experienced teacher is still sought by the young teachers of today, they will find it here in its most agreeable form.

First, the author explains why we must teach English in school at all. He then fills in the pre-school foreground, deals with the kindergarten, and so proceeds with the successive stages of the pupil's life to and through the high school. "English" he conceives as in fact one subject, to be pursued in the same spirit throughout. His chief concern is for the pupil, that in and through the vernacular his life may be enriched and his powers liberated. With the measuring movement he is not impressed, preferring to stress the personality of the teacher and his breadth and command of his subject.

It is a pleasure to announce this new edition of a useful book. The writer does the profession a service in publishing his matured opinions on a most important phase of school work. They will be listened to with pleasure as well as respect.

[3] *The Teaching of English.* Revised edition. By Percival Chubb. Macmillan Company, 1929.

THE ELEMENTARY SCHOOL LIBRARY

Not so long ago a library in an elementary school was a novelty. It is rapidly becoming a recognized necessity. Among the large cities Seattle has made a notable contribution in working out the details of establishment and operation of the elementary school library. Mr. King, of that city, in his recent book [4] makes the results of this experience available to all.

Among the topics treated are these: the place of the library in the school; pupil activities; location; furniture and equipment; qualifications of the teacher librarian; coöperation with the public library; elementary school programs including library service; training in the intelligent use of the library; lists of children's books and magazines; and measurement of the efficiency of the library in the school. These topics are treated in exceedingly definite fashion. Cuts, tables, outlines, lists, and diagrams abound. There are well selected lists of references. The user will find the volume a practical handbook for constant reference.

There has long been a real need for such a book and the author deserves our thanks for the competent way in which he has met it. His little volume will undoubtedly take its place among the indispensable references on the modern elementary school.

THE STUDY OF PERIODICALS

Training in the use of magazines and newspapers is provided for in a recent high school text prepared by two of the teachers in the University of Chicago High School.[5] In view of the place periodicals now occupy in American life, such a book appears timely. The wonder is that others have not preceded it. The authors have conceived their subject rather broadly, so that their book may be regarded as an approach to the understanding of how our magazines and newspapers are produced as well as how they should be used. As a part of the English course or as an adjunct to courses in history and social science, this text will no doubt prove valuable. All young people should acquire the knowledge and skill it represents.

WHAT IS THE VALUE OF IT?

Two numbers in a series of research monographs agree in that they report the results of efforts to evaluate newer procedures in education.[6] Mr. Purdom measured the results of homogeneous grouping based on intelligence tests in five schools and concludes that there was no appreciable gain in homogeneous sections in comparison with heterogeneous sections. He found also that the semester grades given by the teachers in charge of the classes did not agree with the opinions of the teachers, in spite of the fact that the grades were based on the daily class work, monthly tests, and final examinations.

Mr. Cocks sought to determine the pedagogical value of the true-false examination. He assumed that the investigators who have concluded that this type of test is a useful and dependable instrument for measuring progress were justified. His own interest was rather in teaching. He believes as the result of his study that school work is motivated by true-false tests, especially in the case of dull pupils. As an instructional device this test is at least as valuable as ordinary lessons in such subjects as physics, spelling, algebra, and

[4] *The Elementary School Library.* By William A. King. Charles Scribner's Sons, 1929.
[5] *Magazines and Newspapers of Today.* By Gladys Campbell and Russell Thomas. Harcourt, Brace and Company, 1929.
[6] *The Value of Homogeneous Grouping.* By T. Luther Purdom. Warwick and York, 1929. *The Pedagogical Value of the True-False Examination.* By A. W. Cocks. Warwick and York, 1929.

chemistry. Self-correction by students adds to the value. It provides a problem-solving exercise and is valuable for review. In administering it the author would urge the pupils not to guess.

SIGNIFICANT ARTICLES

DETERMINING SUPERVISORY NEEDS

An example of the newer scientific procedure in supervision is supplied by an article in the *Elementary School Journal* for October, by Dr. L. J. Brueckner of the University of Minnesota. This is entitled "A Diagnostic Chart for Determining the Supervisory Needs of Teachers of Arithmetic." The chart as a whole consists of ten divisions with numerous subheadings. The main headings are as follows:

1. Background of technical teaching equipment.
2. Knowledge of specific objectives and functions of arithmetic.
3. Recognition of the function of general method in the teaching of arithmetic.
4. Procedures in presenting new processes.
5. Procedures in diagnosing pupil difficulties.
6. Procedures in providing remedial instruction.
7. Methods of making the work vital and meaningful for the pupils.
8. Methods of socializing the work in the class period.
9. Use of texts in instructing.
10. Points of a general character.

A code for scoring the chart is provided, with four categories, namely (1) superior quality, (2) average level, (3) needs help, and (4) no evidence. The author points out that this diagnostic chart can be used for self-appraisal by teachers themselves.

STUDIES IN EDUCATIONAL THEORY

Dr. Goode of Miami University has added to his previous contribution in the field of research an extensive bibliography of studies in educational theory. His article is found in *Educational Administration and Supervision* for October. The list itself is preceded by an analysis of the problem of dealing with presentations of educational theory, and the 417 titles in the bibliography are classified in a topical index under such heads as "Character Education," "Curriculum," "Methods of Teaching," and the like. The titles of doctors' theses are starred. Advanced students in teachers' colleges in particular will find this material useful in pursuing research.

PROGRESS IN ACTIVITY SCHOOLS IN HAWAII

In recent years several of the public schools of the Territory of Hawaii have been changing their procedures from the traditional formal type of work to the newer activity program. In *The Journal of Educational Psychology* for October, we have a report on the subject matter progress made in three of these schools during the year 1927-1928. The application of statistical technique to the work of these schools was made by Miss Helen G. Pratt, of the Division of Research, Mr. Jack W. Dunlap and Mr. Edward E. Cureton of the Territorial Normal School. In each of the schools an attempt was made to develop activities which should be real in the lives of the children, to increase the range of reading material, emphasize informal procedures, and stress social rather than specific subject matter values. The results in the school subjects were measured by the Stanford Achievement Test. This shows that in two of the schools the work in the school subjects is fully as good as formerly, and in the third a slight gain has been made.

THE ELSINORE CONFERENCE

The October number of *The New Era* is devoted to an account of impressions by

various writers of the summer conference of the New Education Fellowship at Elsinore, Denmark. The frontispiece is a photograph of the opening ceremony in the courtyard of Kronborg Castle on Friday, August 9. This shows a group of several hundred in attendance.

The general theme of the conference was "Individual Psychology and the Curriculum." Contributions were made by speakers from several western European countries and the United States. Both Dr. Harold Rugg and Dr. R. B. Raup of Teachers College were in attendance and spoke. Miss Helen Parkhurst of the Children's University School, New York City, was also a participant. Professor Percy Munn, of the University of London, read a paper on "The Basic Principles of Education," and Dr. Adolphe Ferrière of Geneva spoke on "Psychological Types and Curricula." Reports of progress were made from numerous progressive schools, some of which were illustrated with photographs.

KINDERGARTEN CURRICULUM

Childhood Education for November is devoted largely to articles on the curriculum for the kindergarten. There is a report of some length by the Curriculum Committee of the Wisconsin State Kindergarten Association on "Suggestive Curriculum Material for the Four and Five Year Old Kindergartens." Miss Mabel E. Simpson of Rochester shows how the units of activity in the kindergarten can be coordinated into a single organic whole. The same theme is illustrated by specific accounts of activities in primary grades in Norfolk, Virginia, by Miss Beryl Parker. All these writers agree on the need for reorganization of the program of activities for children from four to eight years of age and they agree in pointing out that such a consummation cannot be reached except through critical thinking and the combined efforts of a considerable number of educational workers. From Miss Simpson's account the reader can learn something of the history of the movement in Rochester, which is no doubt typical of the better school centers.

AN APPRAISAL OF ABILITY GROUPING

An excellent survey of the situation with regard to the ability grouping of pupils in the elementary and high schools appears in *School and Society* for October 5, from the pen of Professor Edward A. Lincoln of Harvard University. The writer recounts in brief the various reports of research studies that have appeared in the past ten years. He next presents at some length two plans for ability grouping, the first as set forth by Ryan and Crecilius in their book called "Ability Grouping in the Junior High School," and the second as employed in Reading, Massachusetts. The article closes with a summary of general principles that the author would apply in appraising the plans of ability grouping now in operation. Among these are: the importance of using more than a single measure, of considering the teacher's judgment, and of recognizing that grouping must necessarily be flexible. Even if the plan of grouping is well worked out, there are difficulties which must be surmounted, such as the inertia of the community, the school board, and the teachers, and the lapsing of the plan into a mere formality.

THE NEW BOOKS

Tropical Tales (Porto Rico). By Elizabeth K. Van Deusen. Newark: Silver, Burdett and Co., 1929. Pp. 240. Illus.

The Music Hour—Third Book. By Osbourne McConathy, W. Otto Miessner, Edward B. Birge, and Mabel E. Bray. Newark: Silver, Burdett and Co., 1929. Pp. 140. Illus.

Geography—Southern Lands. By Harlan H. Barrows, Edith P. Parker, and Margaret T. Parker. Newark: Silver, Burdett and Co., 1929. Pp. 296.

Survey of Higher Education for the United Lutheran Church in America. By R. J. Leonard, E. S. Evenden, and F. B. O'Rear. New York: Teachers College, Bureau of Publications, 1929. Volume I, pp. 623. Volume II, pp. 612. Volume III, pp. 389.

Some New Techniques for Studying Social Behavior. By Dorothy Swaine Thomas and associates. New York: Teachers College, Bureau of Publications, 1929. Pp. 203.

Enriched Teaching of Physical Education in the High School. By Maxie Nave Woodring and Norma Schwendener. New York: Teachers College, Bureau of Publications, 1929. Pp. 143.

The Reading Interests and Habits of Adults. By William S. Gray and Ruth Munroe. New York: Macmillan Co., 1929. Pp. 305. $3.50.

Real Life Stories. By W. W. Theisen and Sterling A. Leonard. New York: Macmillan Co., 1929. Seventh Reader, pp. 489; $.96. Eighth Reader, pp. 504; $.96.

English in Action. By J. C. Tressler. New York: D. C. Heath and Co., 1929. Book One, pp. 468; $1.60. Book Two, pp. 589; $1.76.

Newer Ways with Children. By M. V. O'Shea. New York: Greenberg, Publisher, Inc., 1929. Pp. 419. $3.50.

The Elementary School Library. By William A. King. New York: Charles Scribner's Sons, 1929. Pp. 224.

Practical and Literary English. By George M. Jones and Arthur Yates. New York: E. P. Dutton and Co., 1928. Pp. 464. Illus. $1.90.

The Christopher Robin Reader. By A. A. Milne. New York: E. P. Dutton and Co., 1929. Pp. 171. $1.25.

Standardization of American Poetry for School Purposes. By Lorimer V. Cavins. Chicago: University of Chicago Press, 1928. Pp. 134. $1.50.

The Fred Newton Scott Anniversary Papers. Contributed by Former Students and Colleagues. Chicago: University of Chicago Press, 1929. Pp. 319.

An Introduction to American Civilization. By Harold Rugg. Boston: Ginn and Co., 1929. Pp. 610. Illus.

Creative Power. By Hughes Mearns. Garden City: Doubleday, Doran and Co., 1929. Pp. 396. $3.50.

Modern Mathematics. New Edition. By Raleigh Schorling and John R. Clark. Yonkers: World Book Co., 1929. Seventh Year, pp. 274; $.88. Eighth Year, pp. 306; $.92.

Modern-School Arithmetic. By John R. Clark, Arthur S. Otis, and Caroline Hatton. Yonkers: World Book Co., 1929. Book One, pp. 399; illus.; $.80. Book Two, pp. 386; illus.; $.88.

First Steps in Teaching Number. By John R. Clark, Arthur S. Otis, and Caroline Hatton. Yonkers: World Book Co., 1929. Pp. 225. $1.48.

IN PAPER COVERS

1928–1929 Year Book, Dayton Principals and Supervisors' Association. Dayton, Ohio: Board of Education, Department of Publications, 1929. Pp. 72.

A New Approach to European History. By E. T. Smith. University of Chicago Press, 1929. Pp. 122.

Fourth Yearbook—Educational Measurement. Edited by Edward E. Keener. Chicago Principals' Club, 315 Plymouth Court, Chicago, Illinois, June, 1929. Pp. 170.

The Slide Rule. By Ernst R. Breslich and Charles A. Stone. University of Chicago Press, 1929. Pp. 35. $.50.

Laboratory Manual for Modern European

History. By Jeanette J. Moe and Margaret S. Thorpe. New York: D. C. Heath and Co., 1929. Pp. 141. $.96.

Health Education Tests. American Child Health Association, 370 Seventh Avenue, New York, 1929. Pp. 70. $.60.

Report of the Committee on Terminology. The Federated Council on Art Education. Boston: Berkeley Press, 1929. Pp. 79.

Second Bulletin of the International Committee for Bird Preservation. Compiled by T. Gilbert Pearson, Chairman. New York: 1974 Broadway. 1929. Pp. 51.

Syllabus for a Course in Literature for Children. Detroit Teachers College, Detroit, Mich., 1929. Pp. 180.

Instructor's Manual for Music Appreciation Hour, 1929–1930. Questions and Answers by Walter Damrosch. National Broadcasting Company, 711 Fifth Avenue, New York City. Pp. 67.

Health Education in Teachers' Training Schools. By Iago Galdston. New York Tuberculosis and Health Association, 244 Madison Avenue, 1929. Pp. 15.

A Five Year Building and Future Sites Program. Milwaukee: Board of School Directors, 1929. Pp. 104.

Developing Appreciation Through Teaching Literature. By Angela M. Broening. Baltimore: Johns Hopkins University Studies in Education, No. 13, 1929. Pp. 118. $2.00.

Pre-School Music—A Guide to Parents. By Floy A. Rossman. National Bureau for the Advancement of Music, 45 West 45th Street, New York. Pp. 32.

Publications of the American and Canadian Committees on Foreign Languages: Vol. XII, *The Teaching of Modern Foreign Languages in the United States,* by Algernon Coleman; pp. 299. Vol. XIV, *Prognosis Tests in the Modern Foreign Languages,* by V. A. C. Henmon et al; pp. 182. Vol. XVI, *French Idiom List,* by Frederic D. Cheydleur; pp. 154. New York: Macmillan Co., 1929.

Directing Study of High School Pupils. By Maxie N. Woodring and Cecile W. Flemming. New York: Teachers College, Bureau of Publications, 1929. Pp. 133.

Adventures for the Cleanliness Crusaders. By Alta M. Kelly. Health Cleanliness Service of Proctor and Gamble Co., 80 East 11th Street, New York. Pp. 36. $.10. With materials, $.46.

Social Studies in the Public Schools of Ann Arbor, Michigan. For Kindergarten, Grades 1 and 2, pp. 84. For Grades 3-6, pp. 346. Ann Arbor, Mich.: Board of Education, 1929.

United States Department of the Interior, Bureau of Education Bulletins, 1929: No. 7, *Accredited Higher Institutions, 1927–1928,* by Ella B. Ratcliffe; pp. 56. No. 8, *School Health Work, 1926–1928,* by James F. Rogers; pp. 18. No. 9, *Educational Boards and Foundations, 1926–1928,* by Henry R. Evans; pp. 12. No. 10, *Medical Education, 1926–1928,* by N. P. Colwell; pp. 14. No. 11, *Higher Education—Biennial Survey, 1926–1928,* by Arthur J. Klein; pp. 42. No. 12, *Work of the Bureau of Education for the Natives of Alaska,* by William Hamilton; pp. 6. No. 16, *Significant Movements in City School Systems,* by W. S. Deffenbaugh; pp. 24. No. 18, *Rural Education in 1926–1928,* by Katherine M. Cook; pp. 44. No. 20, *Changing Conceptions of the School-Building Problem,* by Alice Barrows; pp. 20. No. 21, *Industrial Education, 1926–1928,* by Maris M. Proffitt; pp. 24. No. 23, *Adult Education Activities During the Biennium, 1926–1928,* by L. R. Alderman; pp. 18. Statistical Circular No. 12: *Per Capita Costs in City Schools, 1927–28,* by Frank M. Phillips; pp. 11.